THE FOUNDATION OF KNOWLEDGE



A COMPARATIVE STUDY IN ISLAMIC AND WESTERN METHODS OF INQUIRY

LOUAY SAFI

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أَفَمَن كَانَ عَلَىٰ بَيِّنَةٍ مِّن رَّبِّهِ كَمَن زُيِّنَ لَهُ سُوءُ عَمَلِهِ وَاتَّبَعُوا أَهْوَاءَهُم

(محمد: ١٤)

Is then the one who is on a clear evidence from his Lord, no better than the one to whom the wrongness of his conduct seems pleasing, and such as follow their self-inclinations?

(The Holy Quran, Muhammad: 14)

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Preface to Second Edition

Fifteen years have passed since the first edition of *The Foundation of Knowledge* was published in Kuala Lumpur, Malaysia. A lot of research has been done since then to broaden and deepen our understanding of the impact of norms and presuppositions that scholars, wittingly or unwittingly, bring to their scholarly work. A lot has also been written on the relationship between Islam and scholarship historically and in modern society. Today there is a greater awareness of the need to guard against distortions caused by the specific values and presuppositions espoused by individual scholars, as well as the importance of bringing critical analysis to scholarly research underscoring the need to critically engage both modern and traditional scholarship.

The evolution of the debate on the place of modern and traditional methodologies in scholarly research necessitated the reworking of the first and last chapters of this book. Readers familiar with the first edition will find that chapter one has been substantially rewritten, though the question it addresses and the crucial elements of the early discussions remain intact. The last chapter has been slightly modified. Yet the messages of *The Foundation of Knowledge* remain the same; its most fundamental concern is to trace the evolution of scientific methodology and to highlight Islamic scholarship's everlasting contribution to grounding scientific research in social experience while bringing transcendental knowledge to bear on normative frameworks. In addition, the book emphasizes the need to remain open-minded to a variety of scientific approaches to social phenomena. The book, therefore, should be of particular interest to the students of methodology and scientific methods as it catalogues the various approaches to systematic investigation and sheds light on the profound role early Muslim scholars played in laying the foundation of scientific knowledge.

I would like to thank the International Institute of Islamic Thought (IIIT) for their decision to publish a revised second edition of this book. I am particularly grateful to Dr. Jamal Barzinji and Obay Altaleb for

their support and help. Printing the second edition in the United States will also make the book more available to the scholarly community and the general reader in North America and Europe.

Louay Safi
Doha, Qatar

Preface to First Edition

This study has two primary purposes. The first is to critically examine those research methods and methodological approaches, which are associated with mainstream scholarship, both in the classical Muslim and modern Western scientific traditions. The examination aims not only at understanding methods which influenced the development of Muslim and Western traditions, but also at assessing the extent to which they can be incorporated into a modern Islamic methodology capable of responding to the social and intellectual challenges of modern society. Therefore, outlining an alternative Islamic methodology is the second purpose of this study.

For today's Muslim scholars, two sets of methods aiming at understanding and guiding human action are in use. The first set comes from Western tradition. While these methods are helpful in analyzing social interaction, they present Muslim intellectuals with a serious problem, namely, that they do not recognize Islamic Revelation as a proper source of scientific knowledge. The problem is compounded by the fact that as Western scholarship rejects Revelation, it continues to espouse many of the values and ontological assumptions connected with Western religions and cultures.

The second set of methods available for Muslim researchers today was developed by classical Muslim scholars. Classical Muslim methods are primarily concerned with understanding the Divine Text, applying its injunctions for guiding individual action, and restructuring social interaction. Classical Muslim scholars showed, however, little interest in studying social actions which do not fit into the Revealed norms. And while early Muslim scholars studied history, they did not do that in order to discover the laws and forces of history, but only to be inspired by the personality of historical actors. With the exception of Ibn Khaldun's impressive work, *al-Muqaddimah*, Muslim historians by and large were interested in highlighting the personal struggle and accomplishments of military generals and political leaders.

Yet understanding the laws and forces governing the evolution of history is a must for those who would like to comprehend its happenings, and thus to become active participants in shaping historical events and restructuring social relations in ways that bring actual practices into conformity with the principles of truth and equity.

Given the nature of the difficulties facing contemporary Muslim scholarship outlined above, this study purports to overcome the shortcomings of both classical Muslim and modern Western methods by bringing into a synthesis some of the elements developed in the wombs of the two traditions. The synthesis is presented in a unified model outlined in chapter 7. However, the unified model, while building on the achievements of Muslim and Western traditions, is not concerned with bringing harmony between the two traditions, but aspires to integrate the knowledge received from revelation with the one gained from human experience.

Finally, the model presented in this work should not be seen as a full-fledged methodology. Clearly the model requires further development, elaboration, and refinement. The model should rather be seen as a proposal to be examined, and, hopefully, constructively critiqued by those who truly feel the urgent need for the development of an alternative Islamic methodology. It is only in the light of such constructive critique that the proposed model can be enriched.

I wish to express my gratitude to the Research Board of the International Islamic University Malaysia for supporting this study through a grant and reduction of teaching assignments. I am particularly grateful to the chairman of the Research Board, AbdulHamid AbuSulayman, for his personal support and encouragement. Without his strong emphasis on research activities and unwavering support for research work at the International Islamic University, pursuing this project would have been extremely difficult.

I wish to acknowledge the contribution of Mohammad Tahir ElMisawi for reading the entire manuscript and providing useful comments. I should also thank my wife Razan *for her* continuous support, encouragement, and understanding.

All Praise is due to the Almighty Allah.
Louay Safi

Part I

THE INADEQUACY OF ESTABLISHED METHODS

CHAPTER 1

GOING FULL CIRCLE

Human Knowledge and the Imperative of Metaphysics

Modern thought rose out of a fierce and protracted struggle in Europe between the pre-modern religious tradition, which locates ultimate truth in divine text, and a philosophical tradition, The Enlightenment, which places truth in human experience, and insists that truth could be attained through the intellectual examination of human reality. Enlightenment scholars succeeded indeed not only in defending the autonomy of rationality and reason, but also in using human intellect to develop modern social sciences.

Methodical and systematic approaches to understanding human experience propelled modern scholarship forward in striving to provide better understanding of human psyche and social conditions. This led to the development of elaborate theories and research methods in the areas of social studies, economics, politics, psychology, administration, and others. But while modern scholarship made impressive advances by using analytical reasoning to shed light on social phenomena, it hit an impenetrable wall in its efforts to base value systems in an empirically defined rationality. Many modern scholars were initially inclined to cast off the importance of values to social knowledge and social understanding. Some even tried to deny the transcendental nature of values. Ultimately, though, the dominant positivist school was forced to give up its attempt to build human knowledge on a purely empirical basis.

The failure of empiricism and positivism to develop a purely empirical foundation of knowledge has undermined rationality and has emboldened postmodern writers. It has encouraged postmodernists to deny the possibility of pursuing truth, hence placing rationalism on equal footing with irrationalism, and drawing no distinction between

morality and immorality. This put modern scholarship in a serious predicament, as it has neither been able to ground knowledge in empiricist epistemology, nor seems to have the will to retrieve transcendental philosophy.

The trajectory of modern Western thought travels in the opposite direction of the trajectory travelled by historical Islamic thought. Although Western and Islamic thought share the conviction that that human reason lacks the tools to ascertain the metaphysical, and that it is bound by its very nature by empirical truth, they have arrived at grossly different conclusions. Long before modern Western rationalism was awakened, Islamic epistemology strove to limit human rationality to the examination of empirical reality and the analysis of sensory data. Al-Ghazālī pioneered the efforts to use rational argument to describe the metaphysical reality. In *Tahāfut al-Falasifah*, he made a compelling argument against Greek philosophy that anticipated the work of European empiricism. However, rather than strengthening the authority of reason, Al-Ghazālī's work, and that of other *Kalam* scholars, undermined human reason. Ibn Rushd's rejoinders in his *Tahāfut al-Tahāfut* did little to arrest the drive to dismiss rational sciences as uncertain sources of truth. *Kalam* scholars invested their rational power in making the discursive sciences of revelation, hence giving an overwhelming authority to traditions and traditionally transmitted knowledge.

Contemporary work to regain access to transcendence and universal norms that has been lost by the evolution of modern epistemology can benefit greatly from marrying modern Western and historical Islamic knowledge. The current volume is devoted to revisiting methodological approaches of Islamic and Western scientific traditions.

THE INADEQUACY OF EMPERICIST METHODS

The intellectual impasse faced today may be traced back to the Enlightenment scholars' efforts to sever human values from their transcendental basis and to marginalize the importance of religious beliefs, or the lack thereof, in shaping the scholar's attitude, and providing

the transcendental presuppositions essential for social research. Indeed, modern scholars have been acutely aware of the importance of religious beliefs and transcendental values for social experience: from Descartes who insisted that the notion of God was the most fundamental notion of human understanding, to Rousseau who underscored the desirability of a civic religion, to Kant who thought that all moral acts presuppose a belief in human accountability before divine justice, to Hegel who stressed that social experiences are rooted in ethical life.

Yet, they all felt compelled to deny the relevance of religion and religious sources for human understanding and knowledge, and they were all determined to establish the autonomy of human reason. As we will argue in subsequent chapters, epistemological debates have eventually come full circle to the realization that truth lies ultimately in meanings informed by authoritative texts.

Many are still reluctant to acknowledge the centrality of authoritative text for human understanding of the meaning and quality of Being. The debate over approaches to truth is usually framed in the form of dichotomies including fact versus value, subjectivity versus objectivity, science versus ideology, truth versus interest. We do not intend here to reproduce the debate on these dichotomies, but only to point out that those who question the need for, or even the possibility of, an Islamic methodology see methods as purely technical procedures, lacking any normative elements, and hence completely objective. While we agree with the notion that methods can be purely technical, we contend that methodologies which establish the conditions for using methods — such as limitations or sources — cannot be described as purely technical.

In Part III, we will delineate some of the aspects of the methods developed by Western scholars which reveal their Western specificity. Here we will note the inadequacy of Western methods by briefly pointing out their cultural specificity.

First, ever since their early formulation in the works of Francis Bacon and Rene Descartes, modern Western methods have had an empiricist bias which culminated in the logical positivistic approach embodied in Western behaviorism in contemporary times. It is true that many Western social scientists have already abandoned behaviorism under pressure from its critics who have demonstrated the impossibili-

ty of separating fact from value in social studies. Yet, post-behaviorism does not signify a genuine change in the mode of scientific research, but merely a strategic move aligned at silencing critics. The positivistic bias of Western methodologies will be discussed at length in the second part of this work.

By employing empiricist--and hence ahistorical--methods, modern methodologies rise to the level of universal practices abstracted from contemporary Western society, thereby elevating norms embodied in modern society to the status of universal laws. As such, the methods embraced by Western scholarship, even when they remain purely technical, produce normatively biased laws and theories.

Secondly, throughout the last three centuries, Western scholarship was able to completely eliminate revelation as a source of knowledge, thereby reducing it to the level of mere fiction and myth. Although this elimination occurred as a result of the conflict between Western scholarship and revelation in its biblical form, a Muslim scientist finds it impossible to incorporate revelation into social scientific research by relying on modern Western methodology. A Muslim scientist has to either embrace Western methods, and hence exclude revelation as a source of knowledge, or accept revelation at the expense of completely abandoning modern methods and confining himself to purely classical methods.

Two European scholars played crucial roles in devising research methods that reduced the scope of reasoning -to individual contemplation and trapped human experience in empirical experience: Rene Descartes and Immanuel Kant. The former did so by extracting reasoning from textual knowledge and the latter by insisting that the truth humans are capable of expounding is the empirical truth.

ANCHORING KNOWLEDGE IN PURE REASON

Rene Descartes introduced his new method of ascertaining the truth in *Discourse on Method,* which he later refined in *Meditations on the First Philosophy.* In *Discourse on Methods,* Descartes outlines his method in four rules:

> The first was never to accept anything for true which I did not clearly know to be such; that is to say, carefully to avoid precipitancy and prejudice, and to comprise nothing more in my judgment than what was presented to my mind so clearly and distinctly as to exclude all ground of doubt.
>
> The second, to divide each of the difficulties under examination into as many parts as possible, and as might be necessary for its adequate solution.
>
> The third, to conduct my thoughts in such order that, by commencing with objects the simplest and easiest to know, I might ascend by little and little, and, as it were, step by step, to the knowledge of the more complex; assigning in thought a certain order even to those objects which in their own nature do not stand in a relation of antecedence and sequence.
>
> And the last, in every case to make enumerations so complete, and reviews so general, that I might be assured that nothing was omitted.[1]

Descartes begins his search for truth with *hyperbolic doubt,* whereby all the ideas and thoughts he received through education or based on trust in authority were declared doubtful and suspended in a state of negation until such time that they could be grounded in certainty.[2] He justifies his *wholesale* rejection of his ideas by arguing that it would be an "endless task" to run through all of them individually. He then proceeds to argue that even after we have doubted the existence of all objects we are capable of perceiving that one thing can never be doubted, namely, that we, the subjects who undertake the task of doubting, do exist. The conscious self, which is capable of thinking and doubting, is therefore the most fundamental basis of certainty. Hence the famous Cartesian axiom: "I think, therefore I exist."[3]

Descartes' conclusion of the certainty of his existence is in itself problematic because this certainty is not based on the immediate and self-evident awareness of the conscious self of its existence, but rather on the mediated process of thinking. In the latter case, the statement "I

think, I am" can be true only when we accept the truth of the principle of non-contradiction, which says that something can never exist and not exist at the same time. Yet Descartes makes no attempt to establish the principle of non-contradiction. This is a principle whose validity is presupposed by the notion "I think, therefore I am." At any rate, *Descartes has found a bedrock foundation on which he can reconstruct his ideas, viz. the certainty of a thinking existence.* The second step is to establish a connection between his thinking activities and an outer reality. Descartes finds this connection in judgment. For among all the mental concepts that the individual may possess, only judgments refer to external objects and are, therefore, susceptible to error and deception. Wants, desires, and imaginations cannot be declared to be true or false, since they make no claim of resembling or duplicating outer reality.[4]

Despite all the problems, ambiguities, and difficulties associated with the Cartesian method, it was celebrated and embraced by the Enlightenment philosophers and intellectuals -- for it embedded an ingenious mechanism that allowed these intellectuals to break with the past and provided an easy way out of the traditional frame of reference. The Enlightenment now possessed a method of theorizing that it could use to start anew. The method was quickly embraced and employed for the purpose of revolutionizing both the intellectual and social life. Thomas Hobbes was among the first philosophers to make use of the new approach and to translate the Cartesian transcendental subjectivism to political individualism.

LIMITING REASON TO EMPIRICAL TRUTH

The onslaught on transcendental ideas took its sophisticated form in Kant's critical philosophy. While Descartes shifted the locus of certainty from the objective to the subjective world, Kant was able to move it from the transcendental to the empirical. Descartes saw the idea of God as the fundamental basis for the establishment of the truth of objective reality, whereas Kant placed the same idea outside the sphere of ascertained knowledge and endeavored to ground 'truth' in sensible Objects.

Kant saw his mission as one of building the epistemological foundation for the emancipatory project of Enlightenment. He recognized that if reason were to replace revelation as the guiding principle of human thought and conduct, then reason would have to be able to furnish not only the theoretical ground for thought and judgment, but also the moral ground for conduct. His three highly influential *Critiques (The Critique of Pure Reason, The Critique of Practical Reason,* and *the Critique of Judgment)* were written for the purpose of ensuring the autonomy of human reason and to end its reliance and dependence on other sources.

His efforts led, however, to the further differentiation and formalization of reason and, ultimately, undermined the authority of substantive reason. By dividing reason into the three areas of theoretical cognition, practical rationality, and aesthetic judgment, giving each a foundation unto itself, the Kantian critical philosophy differentiated what Weber later referred to as the "value spheres of culture."[5]

Kant set out, in *The Critique of Pure Reason,* to examine "whether such thing as metaphysics be even possible at all?"[6] That is, the main question which prompted Kant to write his *Critique* was to find out whether it is possible for the mind to acquire knowledge apart from experience: *a priori* knowledge as Kant terms it. He observes that all judgments, in which two heterogeneous elements (the subject and the predicate) are united, may be divided into two types: analytic judgments, in which the predicate is already manifested in the subject, and synthetic judgments, in which the predicate lies outside the subject. Analytic judgments are, therefore, tautological since the predicate adds nothing new, which is not already included in the subject. Synthetic judgments, however, add to our knowledge because the information brought to bear on the subject cannot be deduced by analyzing the latter. Kant further observers that synthetic judgments are of two types: posteriori, obtained through experience and is therefore, part or the empirical world, and a priori, preceding all experience, and is part of the metaphysical world.

Having made this distinction, Kant can now reduce the initial question about the possibility of metaphysical knowledge into a more manageable question: "How are *a priori* synthetic judgments possi-

ble?"[7] Kant, obviously, has a practical interest in examining the possibility of *a priori* synthetic judgment. Since dogma and superstition could be ascertained only through this kind of judgment, establishing criteria that would exclude these two types of judgment would definitely contribute to human progress. Like Descartes, Kant recognizes that judgments are the only mental entities that connect mind with outer reality and link the realm of thinking with the realm of objective being. Judgments establish an absolute identity between the subject, which is "particular and in the form of being," and the predicate, which is "universal and in the form of thought." Unlike Descartes, however, he is intent on discrediting metaphysical inquiry and limiting the scope of theoretical research.

Kant distinguishes among three levels of apprehension: intuition, understanding, and reason. *Intuition* is the faculty of sense-perception, whereby the representations affected by the sensible objects are apprehended. The received representations are then organized through the concepts of the *understanding.* The faculty of understanding furnishes the rules by which sense-data are subsumed under the various concepts, hence imputing unity and order to the world of appearances. Finally, *reason* provides the principles which permit the unity of the concepts.[8] Kant maintains that this series of menial activities, in which intuition is connected with pure reason through the understanding, are interrelated. He further claims that the validity of each can be ascertained only insofar as the connection between the three levels of apprehension is maintained. That is to say, the validity of the mental processes that take place at the level of reason could be ascertained only as long as reason is employed for the purpose of demarcating the principles of logic, as to which functions are to regulate *posteriori* syntheses. Kant justifies the limitation he imposes on the use of pure reason by arguing that sense-data is the only access the mind has to the objective world. The correspondence between thoughts and objects has to be substantiated by intuition.

With Kant, transcendental subjectivism, inaugurated by Descartes, became a firmly established meta-theory. Interestingly enough, Kant employed transcendental arguments to rescue empiricism, which came to a dead end with Hume, and then to undermine transcendental

ideas. Kant distinguished between understanding and reason which he considered to be two separate "faculties" of the mind. The Objects of the former are empirical beings, while the objects of the latter are transcendental entities. Kant employed reason to show that *a priori* synthetic judgment is possible through the unity of appearances in the concepts. That the concepts themselves, though, are not part of the empirical world cannot be doubted because their existence is necessary for giving meaning and order to the empirical world.

Yet Kant refused to employ reason for the purpose of ascertaining, or even recognizing, the truth of other transcendental ideas even though their postulation is necessary for giving meaning and order to the moral world. Such ideas as infinity, freedom, dignity, equality, and responsibility have no reality unless they are expressed in mathematical or physical forms: unless the idea can be reduced to number or matter, it can be stripped from its truth and turned into fiction. Clearly, the Kantian epistemology is a theory of empirical knowledge, not of knowledge in general. It takes mathematical reasoning as its prototype. Yet by insisting that all truth has to be firmly grounded in the empirical world, Kantian transcendental subjectivism has postulated the absoluteness of finitude and empowered modern empiricism.

THE INADEQUACY OF TRADITIONAL METHODS

The difficulties facing the effort to reclaim transcendental truth, vigorously pursued by contemporary Islamic scholarship, are made more acute by the fact that pre-modern scientific methods cannot be employed in the task of overcoming the inadequacy of empiricism. This is because traditional sciences are themselves inadequate for guiding the ever evolving human experience. This inadequacy has been highlighted by a number of scholars.

Ismail al Faruqi, for instance, argued that the inadequacy of traditional methods reveals itself in two diametrically opposed tendencies. The first tendency is to restrict the field *of ijtihād* to legalistic reasoning, i.e. subsuming modern problems under legal categories, thereby reducing the *mujtahid* to a *faqīh* (jurist), and reducing scientific endeavors to legal research. The other tendency is to eliminate

all rational criteria and standards by adopting "a purely intuitive and esoteric methodology." Thus, sought-after methodology should avoid the excesses of these two approaches. That is to say, it should avoid restricting reasoning to the extent that modern problems confronting Muslim scholarship are placed outside the realm of scientific research, and at the same time, it should not allow the admission of fiction and superstition into the realm of true knowledge.[9]

The same concern is echoed by AbdulHamid AbuSulayman who links the crisis of modern Muslim intellectualism to the methodological inadequacies besetting contemporary Muslim thought, manifesting itself in the employment of exclusively linguistic and legalistic patterns of thinking. According to AbuSulayman, the dilemma of contemporary Muslim intellectualism is that while the *faqīh* as jurist is trained to handle legal/moral problems, he continues to be perceived as an all-around, universal intellectual, capable of resolving all problems of modern society. As he put it:

> The crisis [of Islamic thought] also lies in the nature of our Islamic methods of research, which are confined to textual studies of language, traditions and orthodox jurisprudence. These two attitudes are manifested in our tendency to regard the faqih (jurist) in the historical sense as one who is capable of resolving the crisis of thought, culture, and knowledge.[10]

Another aspect of the inadequacy of classical methods is highlighted by Mona Abul-Fadl. The reason classical methods are inadequate, she points out, is that while the study of social phenomena requires a holistic approach whereby social relations are systemized pursuant to universal rules, classical methods are atomistic, relying primarily on analogical reasoning.[11] That is, traditional Islamic methods are incapable of reconnecting the particular fields of knowledge to the overall meaning of revelation and human experience.

The inadequacy of modern Western and classical Muslim methods points to the need to forge alternative methodological approaches capable of transcending the limitations of both; however, efforts aimed at overcoming the above-mentioned inadequacies have been hindered

by mounting difficulties. Understanding the difficulties associated with the task of introducing alternative methodological approaches will be our primary concern in the next section.

TRANSCENDENTAL RATIONALITY

Post-modern critique of modernism is, in many ways, a revolt against the latter's efforts to elevate historical—and hence culturally-specific—forms of reason into the level of universal truth. Rejecting the tyranny of modern rationality, post-modernism adopts the opposite extreme by diluting the very notion of reason and truth, and hence threatens to replace modern order with post-modern chaos. Is there then any way out of the current impasse?

Classical Islamic scholarship seems to suggest an alternative approach to knowledge and truth, whereby reason and received texts do not stand to negate each other, and neither can claim final authority. Classical Muslim scholars realized that all texts, including the revealed text, need interpretation. Since all normative systems are ultimately rooted in a religious text of sorts, rejecting the relevance of religious sources to social knowledge is both arbitrary and deceptive. A more methodical approach requires the recognition of the need to root the transcendental presuppositions of scholarly knowledge in divine text and the systematization of all knowledge in a rational discourse.

That is, claims about what is socially desirable cannot be made by provoking the authority of the revealed text, but by illustrating the internal cohesiveness and external consistency of all normative systems that are embedded in authoritative sources. All claims to transcendental truth must be mediated by rational arguments. This would allow a plurality of truth claims without doing away with the possibility of pursuing higher truth, and without stifling meaningful exchange and dialogue among competing systems.

To avoid lapsing into the realm of irrationalism and intellectual tribalism, it is imperative that transcendental values and metaphysical suppositions be openly acknowledged and straightforwardly attributed to their religious sources. This would not only make a fresh beginning of an un-apologetic intellectualism, but could potentially redirect intel-

lectual progress away from the track of irrationalism and moral chaos. As long as religiously discovered truth is defended through rational argumentation, the possibility of falling back into absolutism remains far removed.

While this approach may, understandably, create unease among those whose exposure to intellectual traditions is limited to those of the West, Muslim intellectuals in particular would take comfort in a long Muslim tradition in which science and rationality thrived by asserting, rather than denying, the centrality of divine revelation to human life and thought. Muslim intellectuals and scholars are particularly obligated to provide the leadership needed to reconcile intellectual tradition with modern human consciousness that is increasingly yearning for meaning and value.

This leads us to the question of inadequacy raised in connection with the traditional methods of *al-usūl*. It is significant to note that although the question of inadequacy is usually raised in relation to traditional methods, it is by no means exclusive to them. Modern Western methods are also inadequate for the development of a social science that considers divine revelation an intrinsic source of knowledge. At this stage, however, the term *inadequate* should be understood to mean *less than adequate,* and not *invalid.* The task of contemporary Muslim scholars is, therefore, to examine methods developed in both Western and Muslim traditions to determine the source of their inadequacy, and the possibility of being developed, supplemented, or invalidated.

The Task Ahead

We have, thus far, attributed the inadequacy of traditional methods to three factors: being exclusively legalistic, being overtly linguistic, and being excessively atomistic. Although the above characterization reveals a great deal about traditional methods, and is in the main a fair description of them, it nonetheless overlooks streams within classical thought which attempted to balance some of the mainstream excesses. For example, the theory of *Maqāṣid al-Sharīʻah (purposes of Sharīʻah),* advanced by *al-Shāṭibī,* was intended to systemize the science of fiqh and counterbalance the atomistic tendency in classical legal thought.

It may be concluded, therefore, that there can be no hope for escaping the pre-methodological state of contemporary Muslim scholarship without having a serious and profound encounter with methodological approaches generated in both traditional Muslim and modern Western scholarship. This very idea of examining both classical Muslim and modern Western methodological approaches in order to build on their strengths and overcome their shortcomings is what constitutes the primary task of this study. In our examination of classical and modern methodologies, we aspire to answer four interrelated questions:

1. What methods should one use for deriving social concepts and categories from revealed sources?
2. What methods should one use for deriving concepts and categories from empirical sources?
3. What methods should one use for the differentiation (horizontal ordering) and stratification (vertical ordering) of concepts and categories derived from both revealed and empirical sources? And finally,
4. What methods should one use for linking transcendental concepts and categories with empirical ones?

To deal with the epistemological challenge of reclaiming transcendence and transcendental knowledge as part of the notion of knowledge and truth leads ultimately to issues of methodology. What methods are scientifically defensible in pursuing knowledge grounded in truth? This is the main focus of this book; delineating proper methods for pursuing knowledge occupy the remaining chapters of this book. As the work in this volume underscores methodology and methodological inquiries, a definition will provide a useful frame for the remainder of the text. Methodology is the field of scientific inquiry concerned with the examination of the methods used in the study of natural and human phenomena. A scientific method consists of a number of rules a researcher must follow in the study of the subject matter of his research. Those researchers who apply scientific methods may claim that the knowledge produced by their research is scientific. However, researchers who fail to employ scientific methods may not

lay claim to science, even when the results of their research happen to correspond with the true nature of things. For, lacking the support of a sound method, the correspondence between knowledge haphazardly *produced* and the true nature of things may be a sheer coincidence. This does not mean, however, that inquiries must always use methods currently acknowledged by the scientific community as scientific, for it is quite legitimate for a researcher to use a new method, never used before, provided he can demonstrate its "soundness." The determination of the soundness of scientific methods is the task of methodology.

Methodology is thus the field of scientific inquiry in the justification, description, and explanation of the rules and procedures that constitute scientific methods. As such, methodology is not confined to description of scientific procedures, but involves the analysis of the grounds that justify their use. This means that the study of methodology impinges on questions studied under the label of epistemology, or the theory of knowledge. However, while scientific examination is extended in epistemology to all theoretical questions relating to Knowledge, in methodology the examination revolves around those questions which directly relate to the use of scientific methods.

In this study, we will concern ourselves with exploring methods developed by both classical Islamic and modern Western scholars, in an attempt to arrive at alternative scientific methods more congruent with Islamic norms and concerns.

Part II

CLASSICAL MUSLIM METHODS

Prelude to Part II

Part II is divided into three chapters (chapters 2, 3, & 4). In the first chapter of this part (chapter 2), we focus on the rules of textual analysis devised by early Muslim jurists for interpreting the Divine Text and deriving legal rules from its various pronouncements. A leading figure in this regard was Imam al-Shāfi'ī whose *Risālah* was instrumental in defining the basic issues and methods for analyzing the Divine Text. The discipline which ensued from al-Shāfi'ī's work and similar endeavors later became known as the science of *usūl al-fiqh.* In discussing *usūl al-fiqh*, an attempt is made to (l) introduce the essential methods of textual analysis developed and refined by Muslim scholars, and (2) point out the rigid outlook which gradually took hold on this very crucial discipline of *sharī'ah* sciences, an outlook manifested in the doctrine of infallibility of *ijma'.*

In chapter 3, we examine the encounter between early Muslim scholars and the science of *manṭiq* (logic). Muslim scholars, it is argued, developed their thoughts on logic by studying Greek logic. Both Muslim *falasifah* and *mutakallimūn* appropriated Greek logic and contributed positively to its development. It is also contended that Muslim scholars, *à la* al-Shāt|ibī, were able, towards the middle of the seventh century of the Islamic era, to take *usūl al-fiqh* to an impressive level of refinement and maturation with the introduction of the theory of *al-Maqāṣid.*

Finally, we examine, in chapter four, the predicament in which Elie Muslim scientific tradition found itself as a result of excessive reliance on formal logic and the emergence of an apologetic attitude among leading scholars in the fifth century of Islam. We point out the detrimental consequences of al-Ghazālī's attack on *non-sharī'ah* sciences and his denial of the principle of causality on the basis of polemical arguments, characteristic of formal logic. Formal logic became quite pervasive among Muslim scholars, so much so that the efforts of two towering figures in the history of Muslim scholarship, Ibn Taymi-

yyah and Ibn Khaldūn, failed to alter this trend, despite their powerful and persuasive arguments to reveal the flaws of formal logic and its limitations.

One aspect of classical Muslim methodological thinking should, it is hoped, become clear by the end of Part II, namely, that methods devised by Muslim scholars were concerned mainly with the interpretation and analysis of texts. Muslim scholars did not, therefore, pay adequate attention to the development of methods geared towards understanding social phenomena. And while one can find in *usūl al-fiqh* procedures for including non-textual sources of knowledge, such as ‘*urf* or *istishab*, in developing legal thinking, Muslim understanding of social action and interaction continued to be based on common sense, rather than systematically developed scientific methods and procedures.

CHAPTER 2

TEXTUAL ANALYSIS:

The Rules of Direct Inference

The earliest work in the history of Muslim thought dealing with textual analysis and systematic inference from Islamic sources was written by Muḥammad ibn Idris al-Shāfiʿī (*150*-204 AH). Al-Shāfiʿī wrote his methodological work, *al-Risālah,* to expound the rules of textual inference the jurist (*faqih*) needs in his endeavor to delineate the rules of Sharīʿah. Al-Shāfiʿī's main concern was to prevent arbitrary reading of the Divine Text, establish procedures for interpreting the revealed text, and extend the meaning of original Islamic source to actions and events not directly addressed by Revelation.

Al-Shāfiʿī identified two main sources of meaning: meaning embodied in the Revealed Text (*naṣṣ*)*,* and that deduced *(istinbāṭ)* from it.[12] He therefore proceeded to discuss textual inference under two titles: *bayān* (clarification) and *qiyās* (analogy). The knowledge produced through the application of these two sets of procedures may further be classified, according to al-Shāfi'ī, under the titles of *ikhtilāf* (disagreement) and *ijma'* (consensus). The latter denotes the body of knowledge agreed upon by the scientific community, while the former refers to the disputed area of knowledge. With the emergence of a body of knowledge agreed upon by the scholarly community, the number of sources of scientific knowledge is raised to four: the revealed text, which al-Shāfi'ī refers to also by the term *khabar* (report), consisting of the Qur'an *and* Sunnah; *qiyās* (analogy); and *ijma'.* As he put it: "No one may ever judge a thing as being lawful or unlawful unless (this judgment) is based on a scientific source *(jihat al- `ilm)* — scientific source can be either *khabar* in the Qur'an, or *Sunnah*, or *ijma'*, or *qiyās.*"[13]

Al-Shāfiʿī's classification of the various procedures for acquiring scientific knowledge was, despite its simplicity, very profound, so

much so that the structure he chose to organize the different issues arising under the science *of usūl al-fiqh* (principles of jurisprudence) was adopted by all subsequent *fuqahā'* (jurists), including those who sharply disagreed with him on substantive issues. In fact, the categories developed by al Shāfi'ī were relevant to other fields of scientific research. *Al-bayān,* for instance, was developed by Muslim linguists after al-Shāfi'ī into a separate discipline known as *'Ilm al-ma'ānī* (science of meaning), or semantics, and was employed in both *tafsīr* (interpretation) of the Qur'an and *al-naqd al-adabī* (literary critique). Similarly, *qiyās* (analogy) became one of the procedures of deductive reasoning studied in the science of logic.

In the remainder of this chapter we examine the essential procedures used by classical Muslim scholars under the rubric of *usūl al-fiqh* (principles of jurisprudence). Our major interest is in retrieving two areas of methodical reasoning that were developed by Muslim scholars to a high level of sophistication, namely methods of *bayān* (semantics) and methods of *ikhtilāfistinbāṭ.* (deduction). Following the four categories found in al-Shāfi`ī's *al-Risālah,* we will begin by looking at the methods of *bayān,* of which we will discuss basic procedures used in textual interpretation and analysis. We then will turn to study the use of reasoning in the science of fiqh (jurisprudence). We will review procedures used by Muslim jurists for extending the scope of juristic knowledge. Then we will examine the sources of divergence in understanding and interpreting statements and texts, and the sources of conflict and disagreement in judgment. Finally, we will consider the significance of *ijma'* (consensus).

BAYĀN

Under the heading of "bayān," al-Shāfi'ī explains the different degrees of clarity in the Qur'anic text. Reviewing Qur'anic verses, he demonstrates that certain *ayahs* can be readily understood without the need for any additional external clarifier (*qarīnah*).[14] There are, on the other hand, *ayahs* which are ambiguous, requiring external pieces of information for their clarification. The *qarīnah* can, according to al-

Shāfiʻī, be obtained either through the study of the Sunnah or by considering the rules of the Arabic language.[15]

Although al-Shāfiʿī did not provide an explicit typology, he evidently distinguished among three levels of clarity. The first level is the clear text *(bayyin)*.[16] This type of text is readily clear to those who understand the language of the text, requiring no further clarification. Furthermore, the clear text renders only one meaning and, hence, cannot be subject to interpretation. The example provided by al-Shāfiʿī for this type is taken from *Surat al-A'raf*.

We appointed for Moses thirty nights, and completed (the period) with ten (more): Thus was completed the term (of communion) with his Lord forty nights (142).

The term of communion has been made sufficiently clear in this ayah so that no one can dispute the duration of the communion. We may add that the duration should be known even if the reader is not sufficiently acquainted with arithmetic to be able to add ten to thirty, provided, of course, that he can read the language of the text.

The second level of textual clarity is *zahir* (apparent).[17] The *zahir* is a statement clear by itself requiring no external clarifier *(qarīnah)*. Yet, it has certain ambiguity so as to allow more than one interpretation. Let us take the following example from *Surat al-Ma'idah,* quoted by al-Shāfiʻī himself, to show the source of ambiguity and its possible clarification.

> O you who believe! Kill not game while in the sacred precincts or in pilgrim garb. If any of you does so intentionally, the compensation is an offering, brought to the Kaʻbah, of a domestic animal, equivalent to the one he killed (95).

The source of ambiguity in this verse is the term "equivalent," for equivalence could be expressed both in terms of size and in terms of value. Al-Shāfiʻī chose size as the basis of equivalence because, he argued, it comes first to mind when one thinks of two equivalent domestic animals.[18]

The third and final type of textual clarity distinguished by al-Shāfiʻī is mujmal (intricate). This type requires an external qarīnah (clarifier) for its clarification. Examples of this type are numerous in the Qur'an, among which the following three are listed:

> Verily salah is enjoined on believers at stated times (4:103).
> And complete hajj and ᶜ*Ummrah* in the service of Allah (2:196).
> And establish salah and practice zakah (2:43).

The terms salah, zakah, hajj, and *'Ummrah* are *mujmal* since the specific manner of their performance cannot be derived from the statements themselves, but can be known only by other, more detailed, statements.

The foregoing discussion shows very clearly that *bayān* refers to the set of rules and procedures aimed at establishing the relationship between the linguistic expression and its intended meaning. Al-Shāfiʻī provided the following definition of *bayān:*

Bayān is a comprehensive name denoting meanings, convergent in their roots *(usūl),* but divergent in their extensions *(furu').* The least (degree of clarity) these meanings... possess is that they are expressions *(bayān)* to those to whom they are addressed, those in whose tongue the Qur'an was revealed. These meanings are approximately equally clear to the one (in whose language the Qur'an was revealed), though some are more clear than others, but ambiguous *(mukhtalifah)* to those who do not know the Arabic tongue.[19]

It is obvious from the above definition that al-Shāfiʻī understood the *bayān* in connection with those intellectual activities which are aimed at clarifying the meaning embodied in linguistic expressions.

TABLE 1.1
Bayān (Clarification)
The Degree of Textual Clarity
Al-Shāfi'ī's Classification

Type of Text	Definition	Example	Explanation
Mubayān (Clear)	The meaning of the text is made abundantly clear so that there is no need for any explication (ta'wil) or interpretation (tafsīr)	We appointed for Moses thirty nights, and completed (the period) with ten (more): Thus was completed the term (of communion) with his Lord forty nights (7: 142).	The number of nights has been made abundantly clear, so that it requires no further clarification
Zahir (Apparent)	The meaning of the text may be understood without any external signifier (qarīnah). Though the full under¬standing of the meaning requires clarification of the ambiguity inherent in the text.	O you who believe! Kill not game while in the sacred precincts or in pilgrim garb. If any of you does so intentionally, the compensation is an offering, brought to the Ka'bah of a domestic animal equivalent to the one he killed (5:95).	The term "equivalent" is equivocal for equivalency may be expressed either in terms of size or value. There is a need therefore for further clarification.
Mujmal (intricate)	The text is expressed in such general terms that it requires external signifiers for understand¬ing its meaning.	Verily Salah is enjoined on believers at stated times (4:103). And complete Hajj and 'Ummrah in the service of Allah (2:196).	The terms Salah, Hajj, 'Ummrah require clarification which can be done only by using external signifiers (qara'in).

Bayān Shāfi ʿ ī

TEXTUAL CLARITY: GENERAL TYPOLOGIES

The rudimentary classification of texts in relation to their degree of clarity proposed by al-Shāfi'ī was later developed by subsequent Muslim scholars. The most elaborate classification can be found in the work of Muḥammad ibn Aḥmad al-Sarakhsī (d. 490AH) who belonged to the Ḥanafī school of fiqh. In his work on *usūl alfiqh,* written in 479AH,[20] al-Sarakhsī identified eight degrees of textual clarity corresponding to eight types of texts. The first four have clear reference *(wāḍiḥ al-dalālah),* (Table 1.2) while the reference *(dalālah)* of the rest is unclear *(ghayr wāḍiḥ)* or ambiguous *(mubham)* (Table 1.3). The basic difference between the categories of clear *(wāḍiḥ)* and ambiguous *(mub-*

ham) is that while the latter requires an external *qarīnah* (clarifier) for its clarification, the former can be clarified by analyzing the text itself. The degree of clarity within each, and across these categories, has to do with the extent of textual analysis (or explication) required.

TABLE 1.2
Bayān (Clarification) - Degrees of Textual Clarity
The Ḥanafī Classification

(1) Clear References *(Wāḍiḥ al-Dalalah)*

Type	Definition	Example	Clarification
Zahir (Apparent)	The meaning of the text can be understood without external clarifier (qarīnah); the inferred meaning is not the one intended.	They say: Trade is like usury, but Allah has permitted trade and forbidden usury (2:275).	The apparent meaning of the text is that commercial transactions are permitted, except those involving usury.
Naṣṣ (Conspicuous)	The meaning of the text can be understood without external signifier; the meaning of the text is intended.		The conspicuous meaning is the negation of the equivalence between commercial transaction and usury.
Mufassar (Lucid)	The meaning of the text has been made abundantly clear so that it requires no further clarification.	The woman and the man guilty of adultery, flog each of them with one hundred stripes (24:2).	The number of stripes to be administered to the adulterer and adulteress is lucidly clear.
Muhkam (Palpable)	The meaning of the text is made abundantly clear so it requires no clarification, nor can it be abrogated (nāskh).	Allah has full knowledge of all things (33:40).	A clear text expressing a general truth which is not subject to abrogation.

The foregoing classification is adopted by a school of *usūl al-fiqh* known as *Fuqahā'* (also known as the Ḥanafī school). The majority of *usūl al-fiqh* scholars, known as the *Mutakallimūn* or *Shafi^{c}iyah*, continued to embrace an extended version of *Al-Shāfi^{c}ī's* classification,[21]

which includes alongside the three categories introduced by *Al-Shāfi*ᶜī a fourth category, the *mutashabih*.
(Figure 1.1)

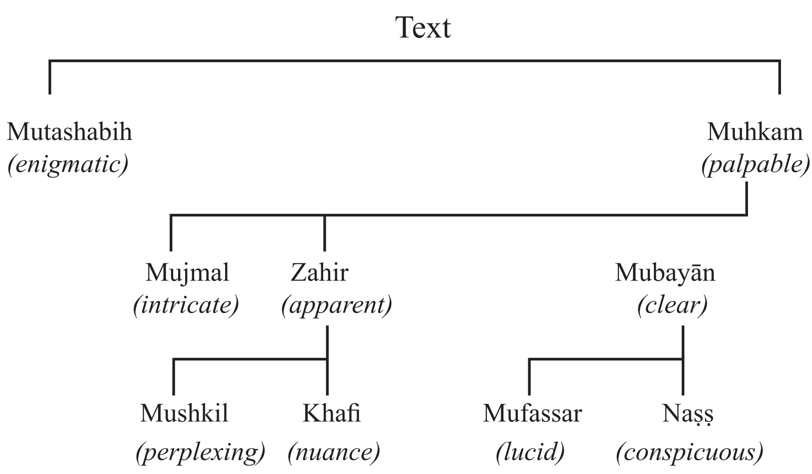
Table 1.3
Bayān (Clarification) - Degrees of Textual Clarity
The Ḥanafī Classification
(2) Ambigious Reference (Ghayr Wāḍiḥ al-Dalālah)

Type	Definition	Example	Clarification
Khafi (nuanced)	The text whose meaning, though sufficiently clear in general, requires clarification in terms of its specific reference	(1) As to the thief, male or female, cut off his or her hands...(5:38) (2) For the killer is no inheritance (hadith)	There is an ambiguity on whether persons who steal money by fraud are thieves in example 1, and whether "killer" in example 2 includes those who unwittingly takes the life of another.
Mushkil (perplexing)	The text whose meaning cannot be derived from its expression without external signifier (qarīnah Kharijiyah)	(1) Divorced women shall wait concerning themselves three qurū' (2:228)	The term qurū' is a homonym. Mushtarak could mean the period of menstruation (hayḍ) or purity (tuhr).
Mujmal (intricate)	The text whose meaning cannot be derived from its expression, and for whose understanding one may not find linguistic or existential signifiers	Verily Salah is enjoined on believers at stated times (4:103)	The term Salah is intricate (Mujmal) and has to be clarified by seeking explanatory texts
Mutashabih (enigmatic)	The text whose meaning can neither be derived from its expression nor from external signifiers. The clarification of its meaning require explication	The Hand of Allah is over their hands (48: 10) The Merciful is firmly established on the throne (20:5)	The terms "hand" and "throne" cannot be taken in their literal meaning, since this contradicts a fundamental principle expressed in the ayah: "nothing whatsoever is like unto Him" (42:11)

Comparing the two typologies one can see that the categories of *naṣṣ* and *zahir* are used in the classifications of both the *Mutakallimūn* and the *Fuqahā'*. The former school, however, includes the Ḥanafī categories of *naṣṣ* and *mufassar* in its *naṣṣ* category and the Ḥanafī categories of *khafi* and *mushkil* in its zahir category. All these categories fall under the category of *muhkam* which is contrasted to the *mutashabih.*

Yet, we can also observe that the elaboration of *mubayān* into *zahir* and *naṣṣ* has been made at the expense of the rigor which one finds in the initial classification made by Al-Shāfi'ī. For one thing, the two categories have not been defined in accordance with an established set of criteria, which prevents confusing one with the other. But for a more important reason, using the criteria of intention to separate the *zahir* from the *naṣṣ* relates to the discussion on the reference of texts and not their clarity. A similar remark can be made on al-Sarakhsī's distinction between *khafi* and *mushkil.* Since the *Fuqahā's* typology does not mark a refinement of that of the *mutakallimūn,* but rather brings an element of confusion into it, we have to choose the latter as the only scientifically defensible typology.

FIGURE 1.1
DEGREE OF CLARITY: THE *SHĀFI'ĪYAH* CLASSIFICATION



We saw earlier that in order to understand the meaning embodied in an expression, one has to study the reference made by both the individual words and the overall expression. We will use the term *implication* alongside the term *reference*, employed by modern semantics, to indicate the relationship *(nisbah)* between the linguistic elements (words, sentences) and the existential elements (things, objects) of meaning. The terms *implication* and *reference* are used here to render the meaning of the Arabic word *dalālah,* which was used by Muslim scholars. We will begin our study of the relationship (*nisbah*) of an expression to its meaning by studying the meaning embodied in the individual terms of the expression, or the implication of individual expression (*dalālat al-lafz al-mufrad*). We then turn to study the meaning embodied in the overall structure of the expression, or the implication of the compound expression (*dalālat al-lafz al-murakkab*).

EXPRESSION, REFERENCE, AND REFERENT

Words may be classified in connection with the relationship (*nisbah*) between the reference and the referent into two typologies: one is qualitatively based and the other quantitatively.

A. The Qualitative Determination of Expressions.

> Three types have been identified by classical Muslim scholars: *mutabaqah* (equivalence), *taḍammūn* (inclusion or intention), and *iltizam* (correlation or extension).[22] (See table 1.4.)
>
> The *mutabaqah* is the meaning which has been established through linguistic convention (*dalālah wad'iyah*); the other two are established through reasoning.[23]

Expressions are used here to denote linguistic symbols or words. Expressions mediate between the objects of the existential world and their image in the human mind thereby making social communication possible. Language, therefore, plays a dual role. It first serves as a means of communication, making social interaction possible. Secondly, it

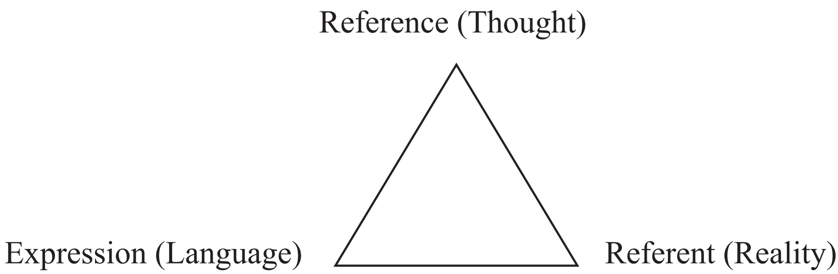
mediates between the thing and the idea, making advanced reasoning possible.

TABLE 1.4
The Qualitative Determination of Expression

Therefore, every linguistic expression (*lafz*) has two counterparts:

Type	**Example**	**Reference- Referent Relationship**
Taḍammūn (intention)	The City of Kuala Lumpur has imposed a new tax on business.	Referent < Reference City is used in reference to city hall
Mutabaqah (equivalence)	The City of Kuala Lumpur is a beautiful city.	Referent = Reference
Iltizam (correlation)	The City of Kuala Lumpur is a highly productive city.	Referent <> Reference City is used in reference to its citizens

one is mental belonging to the human mind, *dalālah* or reference, and the other is existential, belonging to the objective world, *madlul* (referent). Because expression, reference, and referent represent three distinct but closely interrelated realms—namely language, mind, and reality—understanding results from explicating the relationship between the three. It follows that meaning is not simply the property of linguistic expressions, but rather a property of the relationship among three elements: the idea borne in the mind, the word symbolizing the idea, and the object denoted by the idea.



B. Quantitative Determination of Expressions

Quantification of expressions (*taswir al-alfazi*), unlike the qualitative division which concerns the relation between the term and its reference, is concerned with the relation between the term and the group of objects to which it refers (*masadaq*). Here we can identify two types.

1. The general (*'āmm):*

The *'āmm refers* to classes of persons or objects such as man, animal, stone, etc. The general is referred to sometimes by the category, *universal (kullī*). For the sake of precision, the term universal should be reserved only to unapparent objects such as freedom or generosity whose specific, concrete meaning has not been determined.

2. The particular (khaṣṣ):

The khaṣs refers either to individual things or to a small segment of a numerous group. Examples: Samir and Omar are particular instances of the term *man.* Similarly, charity organizations are a particular segment of organizations.

C. Terms Interrelationships

1. *Murādifāt* (synonyms): Terms having the same meaning or *dalālah*, such as freedom, liberty, autonomy.
2. *Mutabayinah* (univocal): Terms having different meanings, such as sea, mountain, man.
3. *Mushtarakah* (homonyms): Terms which have more than one

meaning, such as glasses, club, cabinet. Glasses could mean either the objects used for drinking, or those used for eyesight correction. Similarly, cabinet may denote either the heads of the executive departments of government, or a special closet.

4. *Mutawuti `ah* (multivocal): Terms which denote different degrees or qualities of the same category, such as the terms black, white, grey, which denote color; or the terms chill, cold, cool, warm, hot, which denote temperature.[24]

Although words have meanings prior to their employment in sentences, their significance (*dalālah*) can be determined only by the context in which they are used. For example, the intended meaning of the term *club* by a speaker can be known only by analyzing the entire statement in which it was used. Therefore, in one context the word may mean "a group of people which meet regularly"; though in another context it could simply mean a heavy stick, as demonstrated in the following two statements:

Omar joined our club recently.
Omar was hit with a club.

Similarly, whether the term is meant to have a general or a particular referent can be known only in the context in which it is used. Hence, while the term man may be considered a general term, it could well be so positioned that its referent is particular. To clarify this distinction, let us consider the following examples:

Man is an intelligent being.
This man is very intelligent.

We have, therefore, to turn now and consider the relationship between the reference and referent in compound expressions.

CONTEXTURE (NAẒM): EXPRESSION AND MEANING

ʿAbd al-Qāhir al-Jurjānī was the first to argue that meaning is derived from the overall structure of the text and not from the individual words

which comprise the text. He advanced the *naẓm* (contexture) theory in his book *Dala'il al-I'jaz fī 'ilm al-bayān.* His theory is epitomized in the following excerpt:

> What we have to verify in this section is the difference between what we may call structured letters and structured words. This is because the structuring (naẓm) of letters is only its succession in pronunciation, not its construction pursuant to meaning.... Therefore, if the founder of language had decided to pronounce "teab" instead of beat [he uses the Arabic combination of *rabad* and *darab*], it would have not been deemed incorrect. The construction of words, however, is different because in structuring them you follow the traces of meanings and arrange them in accordance with the patterns of meaning in the mind. The structuring of words, therefore, requires that one consider the interrelation of the structured (words), and not simply join one word to another haphazardly....If it is said: "Structure is embedded, anyhow, in the words, for one can never comprehend the arrangement of meanings you allege unless the words are first arranged in a specific sequence," the response (to this objection) is to say that such (an argument) is what keeps the confusion alive. To resolve the confusion you have to consider whether you join one word to another merely by comparing their attributes. Or you can, reasonably, only say: "it is correct to (put this word) here because its meaning is such-and-such, and its reference is such-and-such, and because the meaning of the expression and its purpose requires such-and-such, and because the meaning of what comes before it anticipates its meaning."[25]

It is clear that al-Jurjānī regards the structure of the sentence or the expression as a surface structure rooted in an underlying structure of meaning. Letters and words are only symbols (*aw'iyah*) arranged in accordance with a specific pattern for the purpose of conveying meaning. The theory of *naz|m* (contexture) outlined above was employed by Muslim scholars for the purpose of textual analysis. In his work on *usūl al-fiqh,* al-Sarakhsī identified four types of textual refer-

ence: *ʿibārah* (statement), *ishārah* (indication), *dalālah* (implication), and *iqtida* (denotation) of a text.[26] (See Table 1.5.)

Table 1.5
Bayān (Clarification)
dalālah al-nanass

The Fuqaha' (Ḥanafī) School

Classification	Definition	Example	Reference (Dalālah)
ʿIbārah (expressive)	The meaning derived from the expression, and intended by encoder-literal meaning	Article 374 of the Egyptian penal code states: "The married woman who has been convicted of adultery shall be sentenced to a term of imprisonment which shall not exceed two years. The husband may prevent the execution of the sentence by agreeing to resume the marital relationship"	A married woman who commits adultery can be punished by up to two years imprisonment. The husband may stop the execution of the sentence.
Ishārah (indicative)	The meaning, though neither explicitly expressed nor intended, is inferred from the expression.		The act of committing adultery by a wife is a crime against the husband, not society. Only the husband has the right to prevent execution of sentence.
naṣṣ (textual)	The meaning derived from the contexture, but not from the expression, of the text.		The husband may stop the initiation of any legal action against his adulteress wife because the one who can execute the sentence can also prevent the procedure leading to it.
Iqtida (implicit)	The meaning derived from the text, but only after including certain terms which, though assumed by the encoder, have been left out.	"My Ummah has been forgiven mistakes, forgetfulness, and action under compulsion" (Hadith) "Ask the town where we have been and the caravan in which we returned" (12:82	My Ummah has been forgiven the sins associated with mistake… Ask (the people of) the town.

The meanings derived the first two types, *'ibārah* and *ishārah,* can be realized by contemplating the individual words comprising the expression. They differ, however, in that the referent (*madlul*) is intended in the former and not intended in the latter. The fourth type, *iqtida,* refers to a sentence whose meaning can become apparent by adding extra words which are presupposed by the sentence itself. A frequently repeated example of this type is ayah 82 of *Surat Yusuf:* And ask the town where we have been and the caravan in which we returned.

The *town* here stands for the residents and the term *caravan* for the travelers. When those two words are added to the sentence, its meaning becomes clear. The need for adding these words for making the expression's meaning clear is suggested by the contexture *(naẓm)* of the sentence. This leads us to the final type, *dalālat al-naẓm,* where the structure plays a primary role for suggesting the meaning of the sentence. Al-Sarakhsī explains:

> [The meaning] established by the implication of the text (*dalālat al-naẓm*) is the one established by the linguistic structure and not by deductive reasoning. This is because the structure has a known form and a meaning intended by the structure. For words are required for the meaning they render, and the establishment of the rule [derived from the sentence] is through the meaning which the expression (*lafz*) requires. Like [the act of] "beating," it has a known form, and a meaning which is intended, i.e., inflicting pain...As the rule is established by considering the meaning known through the linguistic structure, it could also be established by considering the meaning which has not been stated. This is what is called "implication of the text" (*dalālah al-naẓm*).[27]

The classification elaborated by al-Sarakhasī has been embraced by the *Fuqahā'* school of *usūl al-fiqh.* The majority of *usūliyūn* (scholars of jurisprudence) adopt more elaborate schema. They divide the *dalālah* (reference) of the text into two types: *mantuq* (the uttered)

and *mafhum* (the apprehended). The difference between the two is that while individual words point to the referent in the former, the referent in the latter is known not only by what is expressed (*mantuq*) but also by what is not said (*maskut*) in the expression.[28] The *mafhum* is divided in turn into two types: *al-wāḍiḥ* (clear) and *ghayr al-wāḍiḥ* (unclear). The primary difference between the two is that while the reference (*dalālah*) and referent (*madlul*) have an intention-type (*mutabaqah*) relation in the former, they have an *iltizam* or extension-type relation in the latter. The *mafhum* is divided, likewise, into *mafhum inutabaga* (positive apprehension) and *mafhum al- nukhalafah* (contrapositive apprehension). (SeeTable 1.6.)

Remarks on the Two Tables:

1. *Dalālat al-'ibārah* of the Fuqahā' school corresponds to *mantuq sarih* of the Mutakallimūn.
2. *Dalālat al-ishārah* has the same parameters in the two typologies.
3. *Dalālat al-'iqtida,* while considered to be the property of the words in the *mutakallimūn* school, is considered to be the property of structure in the fuqahā' school.
4. *Dalālat al-naṣs* in the *fuqahā'* typology corresponds to *mafhum al-muwafaqa* in the *mutakallimūn*

Table 1.6
BAYĀN (CLARIFICATION)
DALĀLAT AL-NAṢṢ

2. The *Mutakallimūn* (Shāfiʿī) School

Classification			**Definition**	**Example**	**Reference (Dalālah)**
Mantuq (expressed) Meaning derived from ex-pression	Mantuq sarih (explicitly expressed)		The meaning which is readily apprehended	Permitted to you, on the night of the fast, is the to approach your wives...so now associate with them, seek what Allah has ordained for you, and eat and drink until the white thread of dawn appears distinct from the black thread. (2:187)	Eating, drinking, and sexual intercourse are permitted during the night of fast till fajr.
	Mantuq Ghyr sarih (unexplicity expressed)	*dalālah ishārah*	The meaning , though not explicitly expressed, is inferred from the text		In addition to above the state of janabah does not break one's fast.
		dalālat ima	The association of the rule embodied in the expression with its illah	"The thief, male or female, cut off their hands" (5:38)	Theft is the illah of cutting
				"When you prepare for prayer, wash your face".	Prayer is the illah of wudu
		dalālat iqtida	The meaning derived from the text, but only after restoring terms, which though assumed, have been left out.	"Ask the town where have you been…" (12:82)	"Ask [the people of] the town.
Mafhum (implied) meaning derived from contexture	Mafhum muwafaqah (Implication of the accordant)		The implicit meaning of the text when affirming the expressed meaning	"Say no to them [your parent] aword of contempt, nor repel them…" (17:23)	Swearing at and harming parents is prohibited.
	Mafhum mukhalafah (Implication of the contrary)		The implicit meaning of the text when negating the expressed meaning	Description: "If the debater is in a difficulty grant him time till it is easy for him to repay" (2:280).	1. No reference in the case of name (Fuqahā' are in consensus). 2. The implication of contrary is valid in non-revealed text. 3. The Fuqahā' disagree on the implication of the contrary in revealed text. a. Ḥanafī: no implication. b. Jumhur: has implications.
				Condition: "But force not your maids to prostitution when they desire chastity". (24:33)	
				Name: "In wheat there is charity". (Hadith)	

5. *Mafhum al-mukhalafa* has no reference in the *Fuqahā'* school.[47]

Table 1.7 provides an analysis of the relationship between meaning and expression using the classifications of both the *Fuqahā'* and *Mutakallimūn* schools.

TEXT TERMINOLOGY AND DISCOURSE TERMINOLOGY

Certain scholars use the term *khiṭāb* (discourse) instead of text. The two terms seem to have been used interchangeably by early scholars. Abū al-Walid al-Baji, for instance uses the term *fahwa* and *lahn al-khiṭāb* (spirit of discourse) to refer to *mafhum al-muwafaqah* while using the term *dalil al-khiṭāb* (the reference of discourse) to denote *mafhum al-mukhalafah.*

Table 1.7:
Bayān (Clarification) - dalālat al-naṣṣ

1. Fuqahā' (Ḥanafī) School

Type of Reference (dalālah	The relation of the meaning to the expression	Meaning is derived from expression	Meaning is derived from the contexture	The meaning is intended by the encoder
`ibārah	Denotation Adequation	Yes	No	Yes
ishārah	Inherence	Yes	No	No
naṣṣ	Inherence	No	Yes	Yes
iqtida'	Inherence	No	Yes	Yes

2. Mutakallimūn (*Shāf'ī*) School

Type of dalālah (dalālah)	The relation of the meaning to the expression	Meaning is derived from expression	Meaning is derived from the contexture	The meaning is intended by the encoder
Mantuq *sarih*	Denotation Adequation	Yes	No	Yes
iqtida'	Inherence	Yes	No	Yes
ima'	Inherence	Yes	No	Yes
ishārah	Inherence	Yes	No	Yes
Mafhum muwafaqah	Inherence	No	Yes	Yes
Mafhum mukhalafah	Inherence	No	Yes	No

Apparently, the "discourse" terminology became more appropriate as linguists and *fuqahā'* came to the realization that understanding the meaning of the text depends ultimately on grasping the message communicated in it.

EXPLICATION AND METAPHORIC LANGUAGE

It is commonplace knowledge today that words are but symbols used by people to denote certain meanings whose locus is the human mind. This understanding of language was presented in the form of a theory by 'Abd a1-Qāhir al-Jurjānī dating back to the early second Islamic century. `Amr ibn Bahr al-Jāḥiẓ stated in his book *al-Bayān wa al-Tabyin* that:

> ...meanings, which are embedded in people's hearts, conceived in their minds, concealed in their souls, extended in their memories, and rejuvenated in their thoughts, are hidden and covert, distant and strange, concealed and shrouded, hence existing though nonexistent. For man knows not the conscience of his friends, nor the needs of his brothers or acquaintances, nor the intentions of his companions and assistants, who help him in his affairs and in the achievement

> of his objectives, except with something (external to) and independent of (their minds). What makes these meanings apparent is the reference made to them and their expression and employment.[30]

One of the peculiar usages of the symbols of language is manifested in the usage of metaphors (*majāz*) and idioms (*kināyah*) in communication. Metaphors are words used not in their literal sense. Take the following examples.

Sally is a block of ice (Sally is an extremely unemotional and unresponsive person).

Omar is a lion (Omar is an extremely courageous person).

From the two examples, one can see that a metaphoric utterance is a statement in which a substitution (*isti'arah*) has taken place whereby the intended meaning was expressed by a word which has a mediated rather than immediate signification (*dalālah*). This *isti'arah* (substitution) was achieved by omitting the article *like* (*adat altashbih*) and the source of similarity (*wajh al-shābah*) from the simile. The complete structure of the simile (*tashbīh*) has the following components:

Omar is like a lion in courage.

The statement "Omar is a lion" has to be explicated because it cannot be taken literally. In explicating (ta'wil) the meaning, we search for the most conspicuous attribute of the second word *lion* (i.e., courage) and impute it to the first one.

The other, and more complicated, type of metaphor is *tamthil.* Here we have an implicit comparison. Take the following phrase: *the evening of life*. *Life* in this statement has been compared to the day. As the evening of the day is its end, the evening of life is, likewise, its final moments.

A good example of *tamthil* is provided in al-Jurjānī's *Dala'il al-I'jaz*. He narrated that Yazid ibn al-Walīd wrote the following letter to Marwān ibn Muḥammad when he learned that the latter was reluctant

to make *bay'ah* (allegiance) to him: "I see that you are moving one of your feet forward only to move the other backward. When you receive my letter, lean on whichever [foot] you like. *Wassalam."*

Clearly the language used in this example is metaphoric. Yazid employed a figure of speech to convey the meaning that he realized that Marwān was reluctant to make the *bay`ah,* and that he expected Marwān to *decide* either to render the *bay 'ah* or to withhold it.

THE RULES OF METAPHOR

A statement consisting of a subject (S) and predicate (P) is understood metaphorically when P is employed not in accordance with its conventional usage, but is taken to stand for one of the properties associated with it. The relationship between the literal and metaphorical usage of the statement may be schematically represented as follows:

S is P $\Longleftrightarrow$ S is R
Where R is a property or attribute of P

1. For a statement to be understood metaphorically, the following rules must be observed.
2. When the statement is defective if taken literally, the statement should be understood metaphorically.
3. Identify the salient properties of P (e.g., K, L, M, R)
4. Single out the property(ies) of P which can possibly be a property of S.

IMPLICATION: TEXTUAL AND NONTEXTUAL

We saw in the foregoing discussion that *bayān* (clarification) involves an exercise aimed at establishing the link between the reference (*dalālah*) and the referent (*madlul*) so as to clarify the meaning of the uttered words. We also saw that the locus of meaning does not lie in the uttered statement, but is ultimately rooted in the speaker himself. Words are only symbols used by the speaker to express his intimate thoughts—i.e., his desires, intentions, aspirations, needs, feelings, and so on.

Yet language is not the only way for discerning meaning. Meaning could be *implied* by means other than language. The *mutakallimūn* distinguished between two general types of implications: textual (*lafzi*) and nontextual (*ghayr lafzi*). While textual implications require the use of language for communication, non-textual implications are rooted either in convention (*wad'*) or reason (*'aql*). An example of the former is the use of a red light in traffic signals to indicate that the driver is required to stop and green to indicate that he can cross the intersection. An implication rooted in the use of reason would be causal relationships between things—rain indicates cloud, smoke indicates fire, fever indicates sickness, and so on.

In *al-Bayān wa al-Tabyin,* al-Jāḥiẓ classified all possible types of implication *(dalālah)* into five categories. As he put it:

> All possible types of implication of meaning, textual and nontextual, can be classified into five categories, which may increase or decrease (in number). First is utterance (*lafz*), then hint (*ishārah*), then knot ('aqd), then script (*khatt*), then situation (*ḥāl*), which is called [also] *nisbah,* which may stand for all [five] categories, and whose implication is no less than the others...[31]

By *utterance* al-Jāḥiẓ means, as he explains in his book, the spoken words which express the intended meaning. *Hint* signifies either the signal conveyed by the movement of the hand or the head, and body language in general. *Knot* is the movement of the fingers, initially as a helping tool in arithmetic operations. *Script* refers to written symbols. Finally, *nisbah* "is the state (*ḥāl*) [of things], speaking without words, signaling without hands. Such a state is apparent in the creation of the heavens and the earth, and in every silent and speaking, solid and growing, resident and traveling, increasing and decreasing thing."

Not only words and linguistic expressions have meaning, but actions and events also have meanings and implications. The question of the meaning of action and the rules of interpreting actions and specifying their meaning will be addressed in some detail in subsequent chapters.

TA'LĪL

The *fiqhī qiyās* (or qiyās *al-tamthil*) is a type of analogical reasoning that aims at extending the application of a *Sharī'ah* rule from one case to another because the two have some intrinsic similarity. While al-Shāfi'ī included *qiyās* in *bayān,* we have considered it as a case of independent reasoning. The term *"bayān"* has been for the most part used to denote activities relating to text interpretation and explication.

Al-Shāfi'ī considered qiyās the only methodical type of reasoning, and hence the only acceptable procedure for deriving rules of the Sharī'ah. Anything else is arbitrary and unacceptable. He therefore equated *qiyās* with *ijtihād,* and condemned all other types of reasoning as unscientific and, hence, whimsical.[32] Al-Shāfi'ī strongly rejected *istihsan* (juristic preference), arguing that *"istihsan* is but ruling by caprice."[33] However, despite the protest of al-Shāfi'ī, *istihsan* continued to be an important avenue for escaping legal formalism—i.e., sticking to formal procedures even when the rules they produce violate the spirit of the law. Yet while those who defended and practiced *istihsan,* especially Ḥanafī jurists, were not succumbing, by and large, to whimsical inclinations, al-Shāfi'ī's critique was profound, since the practice of *istihsan*, at least during al Shāfi'ī's time, was not done in accordance with well-articulated rules. The scientific vindication of *istihsan* had to wait for little over five centuries until al-Shāṭibī incorporated *istihsan* into his theory of *maqāṣid*

Qiyās is defined by Muslim jurists as the inclusion of an act whose rule has not been determined by a revealed text under the rule of a determined act because the two acts share the same efficient cause *('illah).*

'llah, the efficient cause of or reason for the rule, is a property or attribute of the object of the rule which meets the following three conditions, many of which are redundant (p. 207-208):

1. Apparent (*zahir*): capable of being identified and distinguished.
2. Relevant (*munasib*): the most likely reason for the ruling.
3. Consistent *(muttarid*): the relevant act and the ruling must always correlate.

DETERMINATION OF ‘ILLAH (MASALIK AL‘ILLAH)

Al-Shawkani listed twelve different methods for determining the ‘*Illah*.[34] The twelve can, however, be reduced to three major methods:

1. Textual analysis of the Qur'anic and prophetic statements in accordance with the textual procedures described above.
2. *Ijma‘* of the Muslim scholars on the *‘illah*: This method is not completely separate from the first and the third methodssince *ijma‘* serves only to substantiate the *ijtihād* of individual scholars.
3. *Sabr wa taqsīm* (Examination and Division): This method consists of two main steps: listing all the properties of an object, then examining which one is more relevant to the judgment.

   Example: Wine has the following properties: 1. Red 2. Liquid 3. Intoxicating

By examining the above three properties, the third seems the most relevant.

Muslim scholars, while conceding that the purpose of Revelation should be the ultimate determinant of the rules of the *Sharī‘ah,* insisted that not the purpose, but only the *‘illah* can be used for extending the rules of the *Sharī‘ah*. This is because, they argued, the purposes of *Sharī‘ah* cannot be known by any methodical procedure without which extension of *sharī‘ah* rules to objects and acts would become arbitrary.

The term *t'a‘līl"*refers to intellectual efforts aimed at finding the efficient cause or intent (*‘illah* or *manat*) for the various rules of the *Sharī‘ah.* To do that is to explain the reason (*sabab*) behind the rule. The explanation (*ta‘līl*) of the rules and extending their application to new objects, was considered, after al-Shāfi‘ī, the essence of *ijtihād.* We saw earlier that al-Shāfi‘ī equated *ijtihād* with *qiyās,* because, he argued, *qiyās* was the only methodical procedure for the extension of the rules. In *al-Mustaṣfā,* al-Ghazālī confined *ijtihād* to intellectual ac-

tivities dealing with *'illah*.[35] At first glance, this appears to be a further limitation on the scope of *ijtihād*. On closer examination, it becomes apparent that al-Ghazālī's formulation of the essence *of ijtihād* drastically broadens the scope of *ijtihād. Al-Ghazālī* identifies three types of activities relating to *manat* (intent).[36]

1. *Tahqiq al-manat* (implementation of the intent) means activities aiming at the application of the rule, such as selecting judges or determining whether a particular substance is intoxicating, and hence prohibited.
2.. *Tanqih al-manat* (scrutinizing of the intent) denotes those activities aiming at examining the properties and, in general, the nature of the object addressed by the commands. For example, the *Sharī 'ah* prohibits unequitable transaction. To determine whether a specific transaction is equitable or not, one has to rely on the judgment of economic experts.
3. *Takhrij al-manat* (identification of the intent) means that activities are directed toward discovering the specific property of the object which was intended by the rule after the object itself has been specified, e.g., finding out which property of wine is the reason for prohibition.

Al-Shāṭibī combined the first and second types of *ijtihād* (*tahqiq* and *tanqih*) into one category, thereby providing a twofold classification consisting of the categories *tahqiq al-manat* and *takhraj al-manat.* He argued that *ijtihād* in the area of *tahqiq al-manat* requires neither extensive knowledge of Arabic nor of the purposes of the *Sharī'ah,* but only of the various aspects of a given technical field.[37] He gives as an example of this type of *ijtihād* specialization in the science of *hadith (muhaddith)*.[38]

In terms of the *ijtihād* in the area of *takhrij al-manat,* Al-Shāṭibī distinguished between *mujtahids* who derive principles from texts and those who derive rules from the universal principles of *Sharī'ah,* arguing that while the former need to be acquainted with the Divine Text and the procedures necessary for its interpretation and analysis, the latter may be acquainted only with the purposes.

IKHTILĀF AND IJMA‘ (DIVERGENCE AND CONSENSUS)

Decisions produced through the practice of *ijtihād* by individual mujtahids either converge with each other, resulting in *ijma‘* (consensus), or diverge from each other leading to controversy and disagreement. Both *ikhtilāf* and *ijma‘* are parts of scientific endeavors. This fact was recognized in the first-known Muslim work on methodology written by al-Shāfi‘ī. "There are two aspects of science," he wrote in *alRisālah,* "*ijma‘* and *ikhtilāf*."[39] In this section, we will look first into the sources of *ikhtilāf* and review major procedures employed by Muslim scholars for resolving conflict and differences, then we will discuss some important issues pertaining to *ijma‘*.

IKHTILĀF

Ikhtilāf very often results from applying different methodological approaches to the subject under consideration. The most conspicuous divergence in the study of the *Sharī‘ah* exists between the various schools of fiqh. Yet *ikhtilāf* may occur within the same methodological group when scholars disagree over certain conclusions. But what is the source of *ikhtilāf*? That is to say, what kind of circumstances give rise to divergence? In *al-Muwāfaqāt,* al-Shāṭibī, citing Ibn al-Sayyid, identified eight sources of *ikhtilāf:*

1. The use of homonyms (*mushtarakat*), which permits different explications.
2. The metaphoric usage of words.
3. The existence of other pieces of evidence independent of the evidence under consideration, but relevant to its understanding.
4. Whether the evidence being studied has a general or specific implication.
5. Differences in reports.
6. Differences over the specific structure *of ijtihād* and *qiyas*
7. Whether abrogating (*nāsikh*) evidence can be cited.
8. The possibility of different interpretations of the same evidence.

The eight sources, with the exception of the sixth, relate to the existence of conflicting evidence. The conflict (*ta'arud*) between the evidence can be resolved by employing four major procedures. These are:

1. *Tarjih* (assentation)
2. *Takhmin* (particularization)
3. *Nāskh* (abrogation)
4. Ta'wīl (explication)

TARJIH (ASSENTATION)

The first procedure for removing *taᶜarud* is *tarjih. Tarjih* is called for when conflict appears between two conflicting pieces of evidence. In the discipline of *Sharī'ah* research, conflict usually takes place between two textual statements or two efficient causes (*'illah*). The term *text* here refers to Revealed text, consisting of both Qur'anic statements and their Prophetic elaborations. Since al-Shāfi'ī wrote his *Risālah* in which he gave the *Sunnah* the status of a primary source of *Sharī'ah*, standing on a par with the Qur'an, Muslim scholars have, by and large, considered the Qur'an and *Sunnah* to be coeval sources of *Sharī'ah.* Yet the two have a very important[40] difference in terms of their degree of certainty. While the Qur'an is certain (*qaṭ'i al-thubut*), the *Sunnah* is uncertain *(ẓanni al-thubut*). The bulk of the *Sunnah* (documented in the Hadith) falls under the category of individual narration (*khabar andd*). Only few hadith can be raised to the level of extensive narration (*khabar mutawatir*). Clearly, al-Shāfi'ī was oblivious to the intrinsic difference between the Qur'an and the *Sunnah* when he placed the two on a par. For since the Qur'an enjoys absolute certainty, while the *Sunnah* is at best probable *(ẓanni),* the *Sunnah* has to take a subordinate status to the Qur'an.[41]

In determining the relationship between the Qur'an and the *Sunnah*, Shāfī'i identified three possible types of relation. He states:

> The Sunnah of the Messenger of Allah is of two types: either the Qur'an makes an explicit (*naṣs*) statement, and the Messenger of Allah follows it as it is stated, or [the Qur'an makes] an intricate (*mujmal*) statement, and the message of Allah clarified what Allah stated intricately (*jumlah*)...I do not know of any scholar who disagrees that the Sunnah of the Prophet is of three types. They agreed consensually (*ijma'u*) on two types...The third type [which they don't have consensus on] is what the Messenger of Allah has established, on which the Qur'an is silent.[42]

As al-Shāfiʿī rightly observed, the third type of *Sunnah* which establishes a rule that has not been stated in the Qur'an is the one that has been open for contention, especially between the al-Shāfiʿī and Ḥanafī schools of fiqh.

Yet al-Shāfiʿī's typology is incomplete. For the third type consists of two different types of *Sunnah*: the *Sunnah* which is in line, or at least does not conflict, with the Qur'anic statements, and the *Sunnah* which is in conflict. The fourfold relation of the *Sunnah* to the Qur'an can readily be recognized when we make the comparison between the certain and uncertain evidence, as al-Shāṭibī did:[43]

> The *Sharīʻah* evidence can be either certain *(qat'i)* or probable *(ẓanni)*. If is certain, there is no question that it should be considered...But if it is probable, it either could be subsumed under a certain principle or it could not. If it is subsumed under a certain principle, [the probable evidence] should also be considered. If it is not, it has to be first verified and can never be readily accepted. But this one involves two cases: one contradicts a certain principle, and one neither contradicts nor agrees with it. There are therefore four cases in all. The first one requires no further clarification. The second, the probable

> which can be subsumed under a certain principle, should be implemented. [This type] includes all individual narrations (*khabar aḥad*)...The third, the probable which contradicts a certain principle and is not substantiated with another certain principle, should definitely be rejected...The forth, the probable which is neither substantiated by nor conflicts with a certain principle is open for discussion. Its category is the relevant but unfamiliar (*al-munasib al-gharib*).[44]

TAKHSIS (PARTICULARIZATION)

When part of a general group is excluded from the implication of the rule or evidence, we have a case of particularization.

> Examples:
> "Pilgrimage is a duty people owe to Allah—those who can afford the journey" (Qur'an 3:97).

The above statement is particularized by excluding those who do not have the means to make the pilgrimage. Therefore, only adults who have the means are implied.

Similarly, *ayahs* of inheritance (*mīrāth*) are particularized by the hadith:

> For the killer there is no inheritance,[45]

> Likewise, the *ayah*:
> And those who launch a charge against chaste women, and produce not four witnesses (to support their allegation), flog them with eighty stripes (Qur'an 24:4).

> Particularized by the *ayah,*
> "And those who launch charges against their spouses, and have no evidence (in support) but their own, their solitary evidence (can be received) if they bear witness solemnly telling the truth" (Qur'an 6:24).

> Particularization should not be confined, however, to textual evidence, but should include, as well, established principles of the *Sharī'ah* and its general purposes. For as we will see later, the principles and purposes of *Sharī'ah,* themselves derived from the revealed text, provide a more certain basis for particularization. The employment of the established principles of *Sharī'ah* is especially important when a hadith is used to particularize Qur'anic texts. This is because the *hadith al-aḥad* , which constitute the bulk of the hadith, is a less certain source. Indeed, because of the lack of certainty in using the hadith, Ḥanafī scholars do not allow *takhsis by* individual narration (*khabar aḥad* or *qiyās,* unless the general text or rule has already been particularized by Qur' anic statement.[46]

NĀSKH (ABROGATION)

If two pieces of evidence (*dalīl*) come into conflict, whereby it is not possible to make *tarjih* (both have the same strength), nor *takhsis* (both are general), then this is a case of *nāskh.* (abrogation).

> For example, the following two *ayahs* signify a case of abrogation:
>
> It is prescribed, when death approaches any of you, if he leave any goods, that make a bequest to parents and next of kin (2:180).
>
> Allah (thus) directs you as regards your children's (inheritance): to the male a portion equal to that of two females...for your parents, a sixth share of the inheritance to each (4:11).

Here we apparently have two conflicting Qur'anic texts. Resolving the conflict requires that the time sequence of Revelation be determined, considering that the latter text has superseding power over the former. However, the following conditions must be observed:

1. A text cannot be abrogated except by another text, equal to it in certainty. Therefore, the Qur'an can only be abrogated by the Qur'an. While the Qur'an may abrogate both Qur'an and *Sunnah*. Al-Shāfi'ī, however, insisted that Sunnah may not be abrogated by the Qur'an.[47]

A text may not be abrogated by *qiyās* or *ijma'*.

A text stating a fact, not a rule, may not be abrogated at all.

IJMA' (CONSENSUS)

The classical definition of *ijma'* is "the agreement of the *mujtahids* of the ummah of Muḥammad (*salla Allah 'alayhi wasalaam*) after his death in a particular age on some matter."[48]

Reviewing the *fiqhī* literature, one can identify the following types of *ijma':*

1. *Ijma' al-ummah.* This *ijma'* refers to the agreement of the entire Muslim community. This is the broadest type of ijma' for it presumably includes all professing Muslims. But while it is the broadest in terms of membership, it is the narrowest in term of matters upon which the Muslims are unanimously agreed. These matters are limited, as Ibn Ḥazm noted, to the basic doctrinal and practical principles of Islam. Occasionally the term *ijma' al-ummah* is used, as al-Sarakhsī does, to denote the *ijma'* of the *'ulama'*.[49]
2. *Ijma' al-Sahābah* (Companions). This is the most important type of *ijma',* since through it the Qur'an was documented and verified and through which the basic practices of the *sunnah* have been substantiated.[50]
3. *Ijma' al-'ulama'.* This is the type to which the classical definition of *ijma'* refers.
4. *Ijma' al-'ulama'.*within the various schools of fiqh. Although this type of *ijma'* has not been formally defined in the treatises of *usūl al-fiqh,* it is what many jurists mean when they talk about *ijma'*. This type of *ijma'* is explicitly denoted when the

jurist says "this is the opinion of our companions."

5. *Ijma‘ ahl al-Madīnah. Ijma‘ ahl al-Madīnah* is one of the sources of *Sharī‘ah* in the Mālikī school of fiqh. By this type of *ijma‘*, Mālik means the practice (*‘amal*) of the common people of al-Madīnah since they have inherited the practice of the *Sahābah* and the early Muslim community. However, Imam Mālik considered the *ijtihād* of the scholars of al-Madīnah to have no additional significance over the *ijtihād* of other Muslim scholars. This type of *ijma‘* has been documented in *Mālik's Muwaṭṭa'*, and has, therefore, assumed the form of *fiqhī* document thereby crossing its *ijma‘* status.

The five categories listed above can be reduced to two major categories:

1. *Ijma‘* on textual evidence.
2. *Ijma‘* on judgment arrived at through the practice of *ijtihād***.**

THE INFALLIBILITY OF IJMA‘ (‘ISMAT AL-IJMA‘)

By the fourth century of Islam, the bulk of Muslim scholars seemed to have agreed that whenever an opinion has been substantiated by *ijma‘* in a specific generation, it assumes the status of absolute truth that cannot be contradicted or repealed by later generations. Many scholars, including al-*Ghazālī* and al-Shāṭibī, used the term *ijma‘* to refer to this *ijma‘*. The most important evidence cited to defend this practice *is a* hadith narrated in two versions:

"My Ummah does not agree (have *ijma‘)* on a distortion (*dalalah*)."[51]

The above-cited text exclude in both forms the possibility that the entire *ummah* might agree on error or deviation. The text does not say that whenever the *ummah* arrives at a consensus on a matter that its consensus is absolutely true. Further, the term *ummah* in the above text refers to the followers of Islam in all places and times. As such, it cannot be used to support the contention of the doctrine of ‘*ismat al-ijma‘* which insists that if one generation of Muslims achieved *al-ijma‘* on an issue, later generations are bound by this consensus.[52]

Therefore, early *ijma‘* should hold only insofar as the opinion or the ruling it supports continues to be supported by scientific evidence. When it is shown, however, that the evidence is lacking, *ijma‘* loses its strength and must be rejected.

CHAPTER 3

LOGICAL ANALYSIS:

The Rules of Systematic Inference

In chapter 2, we reviewed methods developed by Muslim scholars for interpretation of texts and derivation of legal rules. In this chapter, we examine methods adopted by early Muslim scholars for the interpreta¬tion of reality. The science which concerns itself with issues relating to the human condition and the nature of existence (the study of being) is *'ilm al-kalām*. To understand the place and significance of *'ilm al-kalām* in relation to other sciences, one need only look at the division of sciences provided in the introduction of al-Ghazaālī's *Mustaṣfaµ*. He states:

> You need to know that sciences are divided into rational (*'aqliyah*), such as medicine, arithmetic, and geometry—subjects which do not concern us more—and religious, such as *kalām,* fiqh and its principles (uṣūl), science of hadith, science of *tafsir* (Qur'anic interpretation), and science of *batin* (inner self), meaning the science of the spirit and its purification from lowly morals. Each of the rational and religious sciences is further divided into universal and particular. The universal of religious sciences is *kalām*; while the other sciences such as fiqh and its principles, or hadith or *tafsir,* are particular sciences. This is because the *mufassir* (the interpreter of the Qur'an) studies only the meaning of the [revealed] Book. The *muhaddith* (hadith specialist) [similarly] looks only to [the question of] hadith authenticity in particular. The *mutakallim [kalām* specialist] is, [in contrast], the one who studies the most general of things— i.e., Being.[53]

He further explains the relationships between *kalām* and the rest of what he calls religious sciences:

> You have learned from this (classification) that [the *kalām* science] begins by studying the most general of things, namely Being. Then it gradually descends to the details we mentioned above [the other areas of particular sciences] to establish the truth of the sources of religious sciences, viz the Qur'an, Sunnah, and the trustworthiness of the Messenger [of Allah]. The *mufassir* then takes from the totality examined by the *mutakallim* one specific [area], the Qur'an, and studies its interpretation. [Similarly] the hadith specialist appropriates another specific [area], the Sunnah, and studies the ways through which it is authenticated. The fiqh specialist [likewise] appropriates one specific [area], the adult's *[mukallaf]* actions, and studies their relations to the *Shari'ah* command.[54]

The foregoing two passages reveal the noble place the science of *kalām* occupied in the classical system of science. The subject-matter studied under *kalām* was the most general one, since it dealt with the nature of reality itself. Al-Ghazālī classifies *kalām* under the religious sciences (as opposed to the rational) obviously not because it excludes rationality and reasoning, but because it subordinates reason to revelation, and he contrasts it with philosophy, which considers reason to be an independent and supreme judge. (The tension between *kalām* and philosophy is examined in some detail in chapter 4). Although *kalām* emerged as a science aimed at finding the existential meaning of certain Qur'anic assertions about existence and reality, it gradually assumed under the Ash'ari school a more defensive stance, especially under the onslaught of Greek philosophy. *Kalām* continued, however, to be highly regarded in early Muslim scholarship not only because it defended the faith against attacks by the pagan-rooted Greek philosophy, but also because it was a universal, an overarching science bringing unity to the particular sciences of religion.

While *kalām* was not, as al-Ghazālī tells us, purely rational, it def-

initely employed rational arguments and rational patterns of thought to respond to the threats of Greek philosophy. The very name of the science, *kalām,'* testifies to the rational nature of the field: The Arabic word *kalām'* means literally speech. By speech, however, classical Muslim scholars understood thought and the process of thinking in general. This signification of the term *kalām* has been clearly articulated by a leading *mutakallim,* Imam alHaramayn Abū al-Ma ʿ ali al-Juwayni, in his book *Al-Irshad:* "The people of truth (*ahl al-haqq)* contend that the locus of speech *(kalām)* lies in the self *(nafs),* for it is nothing else but the mind's thoughts." "It is revealed," he added, "either by statements or by any other signs agreed upon."[55]

SCIENCE DEFINED (TA‘RIF AL-‘ILM)

The *Mutakallimuµn* seem to agree on the following general definition of science *(ʿilm):* "The knowledge of the thing *(shay')* as it exists in itself." This definition dates back to the period when the *mu'tazilah* were the masters of the science of *kalaµm. Al-Baqillanê*, the foremost advocate of the Ashʿari school of *kalaµm* founded by Abu al-Hasan al-Ashᶜart (a former *mu`tazli),* modified the definition by substituting the term knowable *(ma·lum)* for *thing.* However, *al-Baqillanê's* modification seems to be motivated more by his ideological disliking of the *mu‘tazilah* than by scholarly concerns.[56] The term "thing" signified for the *mutakallimuµn,* both the *mu'tazilah* and Ash`arites, an existent. Any existent, no matter what substance, form, or essence it may take, is a "thing." The *mutakallimuµn* believed that the thing-in-itself *(al-shay' alaµ ma huwa bih)* can be comprehended, and hence can be known to the human mind. As we will see in a subsequent chapter, modern science denies, beginning with Kant, the possibility of this kind of knowledge.

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The *mutakallimūn* distinguished among degrees of knowledge. According to al-Farra', knowledge varies, in terms of its degree of certainty, between two ends: *'ilm* (scientific knowledge) and *jahl* (ignorance). Scientific knowledge, as we found earlier, is the knowledge of the "whatness" *(mahiyah)* of the "thing," its intrinsic properties *(muqawwimat),* or the thing-in-itself. Ignorance, on the other hand, denotes a knowledge of the thing that is contrary to its "whatness," or nature. In between these two ends stand two other degrees of knowledge: *shakk* (skepticism) and *ẓann* (probable knowledge). *Shakk* occurs when two opposite understandings of a thing are allotted equal possibilities, while *ẓann* takes place when one of the two possible interpretations is made probable (*rājiḥ*).[57] In terms of the degree of certainty, scientific knowledge ought to be either certain or probable; skepticism and ignorance are not science.

Yet as al-Ghazālī noted, certainty by itself need not be scientific. Conviction (*i'tiqād*) is a case in point. One may be convinced about the absolute certainty of something, yet he might be absolutely wrong. According to al-Ghazālī, conviction occurs when a person holds that something is absolutely true without contemplating the possible truth of its opposite. *I'tiqād* (conviction) is therefore an unexamined belief, and thus is pre-scientific. As al-Ghazālī put it:

> The difference between *'ilm* (science) and *'i'tiqād* (conviction) is that *'i'tiqād* means the acceptance of either of two possible beliefs—viewed from the viewpoint of a skeptic—without contemplating its opposite in the mind, and without allowing its opposite to enter the soul. The skeptic says

> the *world was either* created or eternal. The indoctrinated (*mu'taqid)* says the world was created, and continues to hold that to be true without contemplating the possibility of being eternal. The ignorant *(jahil)* says the world is eternal, and continues to hold this [conviction] to be true. Yet even when *'i'tiqād* accords with the believed thing *(mu'taqid),* it is of the same type of ignorance, though it differs from it in its relation [to the object]. This is because the one who dogmatically believes *(mu'taqid)* that Zayd is in the house will continue to hold the same belief even when Zayd leaves the house. Knowledge *('ilm),* on the other hand, would regard it an impossibility to consider the thing *(ma'lum)* constant while it is changing.[58]

Science requires, as al-Ghazālī tells us, a critical attitude towards the knowable *(ma'lum),* an open-mindedness that allows the scientist to consider the opposites and examine other possibilities. Scientific beliefs are therefore examined beliefs.

If science requires the examination of beliefs, does that mean that all scientific knowledge consists of examined facts and beliefs? Here the *mutakallimūn* distinguished between two types of knowledge: *d|arūrī* (necessary) and *aẓarī* (theoretical) knowledge. Necessary knowledge is innate *(fitrī),* emanating directly from the very nature of human reasoning; one is born with it and does not acquire it from experience. Further, it is necessary knowledge because one cannot deny its outcome without falling to the realm of absurdity *(sukhf).* Self-knowledge and the principles of reason such as the principle of identity and non-contradiction are good examples of this kind of knowledge. Theoretical knowledge, on the other hand, is an inferred *(istidlāli)* knowledge and is hence acquired *(muktasab).*[59]

Naaẓarī knowledge is acquired through *naz|ar* (reasoning). Al-Juwayni defined *naẓar* as "the [process of] thinking through which is acquired whatever [knowledge] based on *'ilm* (certain knowledge) or *ẓann* (probable)"[60]. Acquired knowledge through reasoning, he argues, may be divided into two types. Correct (*saḥiḥ*) or incorrect *(fāsid).* Correct knowledge is supported by evidence *(dalīl),* anything else is

considered incorrect. Al-Juwayni held that in order for evidence to produce correct knowledge, two criteria must be met:[61]

1. The evidence must be substantively correct.
2. The formal rules of derivation *(sunan al-dalīl)* through which the evidence is acquired should be sound.

In terms of the substantive sources of scientific evidence, al-Juwayni identified two major sources: *'aql* (rational) and *sam'ī* (narrative or authoritative). Al-Ghazālī further elaborated the sources into seven:

1. Axiomatic (*awwaliyyāt*): self-evident knowledge which is necessarily known *a priori* (*qabliyyah*).
2. Sentimental (*mushāhadāt bāṭiniyyah*): self-knowledge, or knowledge of one's inner self and emotions.
3. Sensory (*maḥsūsāt bāhiriyyah*): knowledge through the senses.
4. Empirical (*tajrībat*): knowledge through observation.
5. Extensive narrations (*Mutawātirāt*): facts established through numerous accounts.
6. Illusory (*wahmīyyah*): based on pure common sense.
7. Acceptable (*mashhurat*): widely accepted opinions and proverbs.[62]

Although al-Ghazālī discussed these types of sources under the label of certain knowledge, some of the discussed types can hardly be described as certain sources of knowledge. In fact, this list seems to be an expanded version from an earlier one introduced by Ibn Sīnā. Ibn Sīnā identified only four sources of certain knowledge: axiomatic, empirical, extensively narrated, and sensory.[63]

LOGIC

Early *mutakallimūn* were reluctant to accept the validity of Greek logic as a tool for sound reasoning. However, they gradually came to accept

it as an essential method of reasoning, as logic received the support of several eminent scholars. Logic became an important method of scientific research, after al-Ghazālī boldly embraced a slightly modified version of the Aristotelian logic, considering it an essential method of science. Al-Ghazālī, furthermore, expanded the authority of logic to *fiqh* reasoning, insisting that no one's scholarship can be trusted without his having mastered logic. Many early Muslim scholars felt that Greek logic was redundant (since the science of *naḥw* (Arabic grammar) provided the proper rules and structures for linguistic inference. For many of them, logic was a Greek grammar while *naḥw* was an Arabic logic. This understanding is reflected in a debate on the relationship between logic and grammar which took place at the court of the Abbasid Minister Ibn al-Furat between Abū Said-al-Hasan al-Sirafi, an eminent linguist, and Matta ibn Yunus, a leading logician of his time.

Following are excerpts adopted from the debate script as it was reported by Abū Hayyān alTawhīdī.

> al-Sirafi: Why should Turks, Indians, Persians, or Arabs study it [logic] or take it as a criterion of judgment?
>
> Matta: [study of logic] is necessary [for all] because logic is a rational search for objects (*aghrad ma'qulah*) and meanings... and people are equal in [their apprehension] of meanings; do not you see that four and four equal eight is true for all peoples (umam)?
>
> al-Sirafi: If the object pursued through reason and the one expressed in words ... have the same degree of clarity as *four plus four equals eight,* there should be no disagreement but only agreement... But if reasoned objects and the apprehended meanings cannot be attained except through language consisting of nouns, verbs, and articles, does not that require knowledge of the language [itself]?
> Matta: Yes

> al-Sirafi: Then you are not calling upon us to learn logic but to learn the language of the Greeks. But how could you call upon us to learn a language [that you] yourself do not comprehend?[64]

To embarrass Matta, al-Sirafi posed to him a grammatical question concerning the significance and rules of usage for the Arabic particle wa (and), to which Matta responded:

> This is grammar, and I have not contemplated grammar. For logicians do not need grammar, though the grammarians need logic; because logic studies meaning, while grammar studies expression. The logician encounters expression only superficially (*'aradi*), whereas the grammarian's encounter with meaning is intimate (*gharad*). Hence, the meaning is superior to expression, while expression is inferior to meaning.

> al-Sirafi: You are wrong, for logic (*manṭiq*) grammar (*naḥw*), expression (*lafz*), articulation (*ifsah*), declaration (*i'rab*), informing (*inba'*), speech (*hadith*), reporting (*ikhbar*), inquiring (*istikhbar*) locution (*'ard*)…, are of the same type and nature.[65]

This interesting exchange between a leading grammarian (*nahwī*) and logician (*mantiqi*) reflects the tension that existed between the two disciplines. The tension between the two rooted in ideological conflict is behind the extreme positions taken by al-Sirafi and Matta. For neither is Matta justified in denying that linguists study the relationship between meaning and expression, for they obviously do, as we demonstrated in chapter 2, nor is al-Sirafi justified in denying that logic could be independent from the substantive study of language. The latter confusion may be attributed primarily to the failure to distinguish between formal and material logic. Later logicians focused on the study of formal logic and resorted to the use of symbols, as Ibn Sīnā did, to highlight their concern with the formal or structural aspect of the statement. Clearly logic and language are closely interrelated. As

we will see later, many of the problems arising in the study of logic have a linguistic origin. We will see how logical arguments (*muhakamat*) misrepresent reality when they are incognizant of linguistic rules. Logicians use the term fallacy to refer to this kind of argument.

Falāsifah (Muslim philosophers) and *mutakallimūn* divided the study of logic into two parts: the study of *taṣawwur* (concept) and the study of *tasdiq* (validation). The latter is in turn divided into the study of *qadiyyah* (proposition) and the study of *qiyās* (syllogism). (The division of *tasdiq* into *qadiyah* and *qiyās* is not universally embraced. Ibn Sina, for instance, equates *tasdiq* with *qiyās,* while al-Ghazālī equates it with *qadiyyah.*)[66] This division is designed, al-Ghazālī tells us, so as to make the structure of logic correspond to the structure of knowledge and ultimately to the structure of reality itself. Concepts are intellectual tools (*alat*) aimed at identifying the individual objects that comprise the world. Propositions help us to define the relationship *(nisbah)* between objects. And syllogisms allow us to derive new knowledge about the objects of the world from the knowledge already possessed.[67] We will divide, therefore, the study of logical questions into three areas or branches:

1. The logic of concept.
2. The logic of proposition.
3. The logic of syllogism.

Concept (Taṣawwur)

The concept of an object is simply the mental representation *(tamthīl)* of a given object. That is, the concept is what the mind can comprehend about this object. The comprehension of an object, or its conceptualization, means that one has been able to identify the constituting components of the object. These components are of two kinds: intrinsic *(jawharī or dhati)* and extrinsic or accidental *('araḍī). To* have a true concept (a profound concept, that is) requires that one identify the intrinsic aspects *(muqawwimat)* of the objects which constitute its "whatness" *(mahiyah).* When that occurs, the scientist will then be able to provide a precise definition, or *ta'rif bi-al-hadd,* of the object.

Otherwise the description of the object will be provided by a connotative definition, or *ta'rif bi-al-rasm.*

For classical Muslim scholars, the process culminating in providing a precise definition *(ta'rifhaddi)* for an object is nothing but a process of concept formation. As Ibn Sīnā put it:

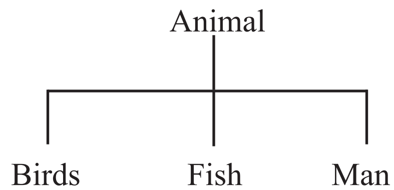
> The *hadd* (precise definition) is a statement reflecting the nature *(mahiyah)* of the thing. It undoubtedly includes all of its intrinsic components. The precise definition consists, therefore, of the *genus and differentia* of [the object], since the intrinsic components *(muqawwimat)* which the thing has in common [with others] is its *genus,* while the intrinsic component peculiar to it is its *differentia*.[68]

Clearly, Ibn Sīnā*,* following the Greek logicians, believed that the concept of something is attained only when a precise definition of the thing is provided, that is, when the *genus* and *differentia* of the thing are known. To identify the *genus* (jins) and differentia *(fasl),* classical Muslim scholars adopted a technique developed by Porphyry, a neo-Platonic philosopher of the third century, known as Porphyry's Tree. The division schema adopted by Muslim logicians called for the use of five categories of the classification of the object in relation to other objects of the world. These categories known as the five names, or universals, are: *jins* (genus), *naw' (species): fasl* (difference), *khāṣṣah* (property), and *'araḍ'āmm* (general accident). To define the thing (linguistically render the concept), one has to determine the general set (genus) where the thing is a member of one of its subsets (species). Then one has to identify the distinguishing component (difference) of the subset to which the defined thing belongs. When that is achieved, a precise definition can be provided.

For example, to define man, a scholar has to define the general set (genus) to which the subset (species) man belongs. The genus *animal* is the general set that includes the group *man* as one of its subsets. Others may include different species of animals. The distinguishing property that sets man apart from other animals is his rational capacity; therefore, the precise definition of man is that "man is a rational

animal." Yet man can be defined as a species of individuals who laugh, talk, socialize, and so on. By defining man through his properties *(khasa'is)* we obtain a connotative definition *(ta'rif rasmi)*.

Jins (genus): Animal
Naw' (species): Rational animal
Fasl (difference): Rational
khāṣṣah (property): Capable of laughter
'Araḍ 'amm (accident): Blind



Rules of Definition

The following rules have been traditionally laid down by logicians:[69]

Rule 1: The definition should be *coextensive* with the thing defined. The definition should neither be broader than the definiendum so as to include any other object, nor should it be narrower so as to exclude parts of the defined object. This is what classical scholars mean when they refer to a definition as a "comprehensive but exclusive term" [*al-hadd al jami'al-mani'*].

Rule 2: A definition should state the essential attributes of the species.

Rule 3: A definition must not be circular. That is, it should not define by synonyms [*muradifat*] and antonyms [*muta'akisat*], e.g. defining a parent as the person who has a child.

Rule 4: A definition must not be expressed in ambiguous, obscure, or metaphorical terms.

Rule 5: A definition should not be negative where it can be affirmative.

The question arises: can we consider the definition and the concept of an object of thought as one and the same? Unless we insist that the definition of the object must provide a complete list of the essential and accidental attributes of the defined object, our answer has to be in the negative. The basic function of a definition is to provide a general demarcation of the object under consideration so as to differentiate it from other linguistic terms. Recognizing the subtlety and intricacy of the concept, Ibn Sina used the phrase *al-qawl al-sharih* (interpretive statement) in reference to the linguistic rendering of the concept.[70]

The concept is profound enough that some of its intricate elements might be left out of its linguistic expression. "All the essential properties of the concept are included in its scope of meaning," Ibn Sina noted, "even when they are not borne with clarity in the mind. However, when their [properties] are borne in mind, their mental representation[s] become apparent."[71]

THE PROPOSITION

The proposition *(qadiyah) or* the declarative statement *(jumlah khabariyah)* —or simply statement—is a simple sentence relating one term (or thing) to another. The first is called the subject *(mawḍū‘* or *ism*); the other is the object or predicate (*mahmul* or *khabar).*

Declarative statements are distinguished from other types of statements in that only they can be described as being true or false. Take the following examples:

1. Close the door!
2. Please close the door.
3. Is the door closed?
4. The door is closed.

Although the four statements use the same two basic words they have markedly different significations. The first signifies a *‘ommand,* the second a *request,* and the third *a question.* Notice that none of the three statements claims to describe things as they exist in reality. Thus,

one cannot attribute truth or falsity to them. Only the fourth statement can be judged as true or false. Therefore, only the declarative statement is a proper subject of *logi'*.[72]

Types of Propositions

We can identify three types of propositions: categorical *(hamli),* conjunctive *(sharti muttasil),* and disjunctive *(sharti munfasil).* The latter two types are also called conditional propositions.[73]

Categorical *(Hamli)*

Categorical propositions are the simplest type of proposition in which two terms are related *(mansub)* to one another. For example, "the student is diligent" is a categorical proposition. Logicians use quantifiers *(sur)* to specify the quantity of the subject. We have two kinds of quantifiers *(sur):* universal, in which the word "all" *(kul)* is used, and particular or existential, in which the word "some" *(ba'd)* is used. Further, the proposition can be expressed in either the affirmative or the negative. We have therefore four possible ways to express any categorical proposition. Applying these four cases to the example cited above, we get the following forms:

1. *All* students are diligent.
2. *Some* students are diligent.
3. *No* student is diligent.
4. *Some* students are not diligent.

The relationship among the four possible forms of the categorical propositions is usually demonstrated in the square of opposites *(murabba' al-taqabulat).* The four possible relationships are:

1. Contradictory relationship: occurs when the two propositions differ in both quality and quantity, as is the case between (1) and (4) or (2) and (3) in the above example.

2. Contrary relationship: occurs between universal propositions which differ qualitatively, as between (1) and (2).
3. Subcontrary relationship: occurs between two particulars differing qualitatively, as between (2) and (4).
4. Subaltern relationship: occurs between universal and particular propositions which are qualitatively similar, as between (1) and (2) or (3) and (4).

The truth-relations among the forms of propositions can be determined by the following rules:

1. Contradictory propositions cannot be true or false at once.
2. Contrary propositions cannot be true at once, though they could be false at once.
3. Subcontrary propositions cannot be false at once, though they could be true at once.
4. Subaltern propositions have two rules:

    i. If the universal is true, the particular is true; but if the particular is true, the universal is unknown.

    ii. If the universal is false, the particular is unknown; but if the particular is false, the universal too is false.

Conditional Propositions

Conditional propositions are compound propositions formed by joining two simple statements.

The following is an example of a conditional statement:

If you attend classes, then you pass the course.

Note that the proposition consists of two statements. The first is called the antecedent *(muqaddam), in* our example the statement "you attend classes" is the antecedent. The other sentence is called the consequent (tāli); thus, the statement "you pass the course" is the

consequent. The general form of the conditional proposition may be rendered in an abbreviated statement as follows:

If (antecedent), then (consequent), or If *p*, then *q*

The above statement form or structure is frequently used by scientists. Since the expansion of knowledge occurs by either justifying or refuting propositions, the conditional proposition provides a convenient structure for this purpose. Furthermore, the above structure helps us to establish three different types of conditional relationship between the antecedent and the consequent, in which the antecedent may be a sufficient, necessary, or necessary and sufficient condition for the antecedent.

Sufficient Conditions

Using the example cited above we may express the relationship between the antecedent and the consequent in either of the following two statements.

If you attend classes, then you pass the course.

Your attending classes is *sufficient* for *passing* the course.

Substituting the above statements by statement form we may write:

If *p* then *q* (I)

p is sufficient for *q* (II)

Note that by expressing the conditional proposition in the second statement form, it is implied that attending classes is the only event that has to take place for the statement of the consequent to materialize. However, if you happened to learn that other events, such as scoring 90 points in the course work, must occur as well, then attending classes would not be a sufficient condition for passing the course. What does it mean, then, if you attend all classes, but fail to pass the course? It simply means that the conditional statement, and hence the

existential condition referred to by the statement, is false. Hence the following rule:

A conditional statement with true antecedent but false consequent is itself false.

Necessary Conditions

We have discovered, however, that there is a set of conditions of which fulfillment is necessary for passing the course. In our example, the set consists of two conditions that can be stated as follows:

If you attend classes, then you pass the course.
If you score 90 points, then you pass the course.

The above two statements can be expressed differently by saying:

Your attending class is necessary for passing the course.
Your scoring 90 points is necessary for passing the course.

Using a statement form we may write:

p is necessary for *q*

The two conditional statements may be combined into one by conjoining their antecedents:
If you attend classes and score 90 points, then you pass the course.

If $(p_1$ and $p_2)$, then *q*

Necessary and Sufficient Conditions

If *q* is true, and p_1 and p_2 are true, then the entire conditional statement is true. This makes p_1 and p_2 necessary and sufficient conditions for *q*. This relation can be expressed in the following statement form:

q if and only if (p_1 and p_2)

The foregoing statement expresses a causal relationship (with some qualifications which we will discuss in a subsequent chapter). The event q is caused by a set of conditions (p_1 and p_2). Each of p_1 and p_2 is a necessary condition for q, and the total set is a sufficient condition for the occurrence of event q.

Argumentation *(Muḥajjah)*

Ibn Sina noted in his important work *al-Isharat wa-al-Tanbihat* that reasoning signifies the movement of thought *(fikr)* from knowledge with which the mind is acquainted to new knowledge.[74] He argued that for the movement of thought to produce scientific knowledge, it had to take the form of an argument (*ḥujjah*), which could follow the pattern of syllogism *(qiyās)* or induction *(istiqra')*.[75]

Like propositions, arguments may be divided into two major types: *'ategori'al (hamli) and* conditional *(sharti), with* the latter divided into conjunctive *(muttasil)* and disjunctive *(munfasil).*

Categorical Arguments

Consider the following statement:

> The man died instantaneously because he was hit in his brain with a bullet.

This is a compound statement consisting of two simple statements:

> The man died instantaneously.
>
> He was hit in his brain with a bullet.

Notice the second simple statement is used in the compound statement to explain the first one. The explanatory relation between the two is denoted by the term "because." But how could the second provide such an explanation? Most readers would find the above statement so self-evident that they would seek no further clarification. The case would be different if we were confronted with the following statement:

> Reagan cannot be re-nominated for the presidency because he has served two terms as U.S. President.

For a person who is not familiar with U.S. constitutional law, the second statement does not provide any satisfactory explanation for the first. To make the connection clear one has to add another statement:

> Any president who has served two terms cannot be re-nominated.

The Structure of Syllogism

A complete argument *(ḥujjah)* should comprise three and not only two statements: two premises and a conclusion. Let us see how a complete argument is structured.

1. Reagan is a U.S. president who has served two terms.
2. Every president who serves two terms cannot be renominated.
3. Therefore Reagan cannot be renominated.

The first statement is called the minor premise *(al-muqaddimah al-ṣughra),* the second is known as the major premise *(al-muqaddimah al-kubra)*, and the last one is called the conclusion *(al-natījah).*

The question arises here as to why the conclusion should follow from the two premises.

To answer the question, let us take a simple example:

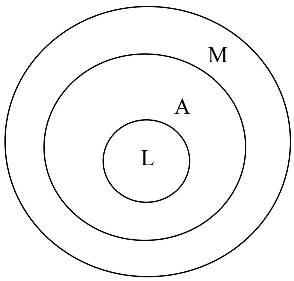
1. Every lion is an animal.
2. Every animal is mortal.
3. Therefore, every lion is mortal.

The foregoing syllogism may be written in the following abbreviated form:

1. Every L is A.
2. Every A is M.
3. Therefore, every L is M.

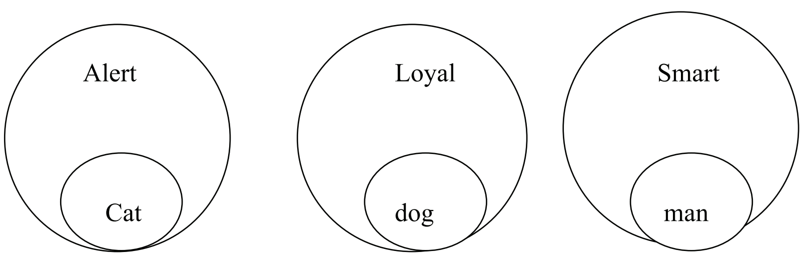
Notice that the syllogism has only three terms, and that this movement of thought from the premises to the conclusion is made possible through the agency of the middle term. To illustrate how the middle term relates to the minor and major terms, let us use set representation:

It is clear from the diagram that L is a subgroup of M. Using diagrammatic representation one can review the possible intersections



between the various forms of the syllogism. Therefore, a diagrammatic representation shows why the following argument is invalid:

1. Every cat is alert.
2. Every dog is loyal.



3. Therefore, every man is smart.

Circular diagrams also help us to verify the truth of negative syllogisms:

1. No stone is alive.
2. Marble is stone.
3. Therefore, no marble is alive.

Rules of the Syllogism

The following eight rules should be observed when analyzing syllogisms:

1. The syllogism has only three terms: minor, major, and middle.
2. No term may be broader in the conclusion than in the premises.
3. The middle term must not appear in the conclusion.
4. The middle term must be distributed at least once.
5. From two negative premises nothing follows.[76]
6. Two affirmative premises cannot give a negative conclusion.
7. The conclusion must follow—quantitatively and qualitatively — the lesser premise.
8. From two particular premises nothing follows.[77]

Validity *(Ṣihhah)* and Invalidity *(Fāsad)*

The rules of syllogism are designed to ensure the validity of the argument *(ṣihhah)* and not its substantive truth *(ṣidq).* An argument is valid if it is structured in accordance with the formal rules of the syllogism. Logicians have identified four major forms or figures (*ashkāl*), each with some minor forms or moods *(aḍrāb).* We are not going to discuss these forms here since arguments can better be verified by using circular representation. The truth of an argument is, however, determined by examining whether the stated facts correspond to the objects of reality.

Conditional Arguments

Conditional arguments have two valid forms: (1) affirming the antecedent *(muqaddam)* and (2) denying the consequent (tāli):

1. If p then q
   p Thus, q

2. If p then q
   Not q
   Thus, not p

Consider the following example:

1. If you score over 90, then you receive an A.
   You score over 90.
   Thus, you receive an A.
2. If you score over 90, then you receive an A.
   You do not receive an A.
   Thus, you did not score over 90.

Denying the antecedent or affirming the consequent does not, however, produce valid arguments. Consider the following statement:

If Kuala Lumpur is in Johor, then it is in Malaysia.

Notice that while affirming the antecedent produces a valid argument, affirming the consequent does not. Kuala Lumpur is indeed in Malaysia, yet it is not in Johor. Similarly, denying the antecedent does not negate the truth of the consequent. This would be the case when the antecedent is not a necessary condition for the consequent.

Division and Examination ***(al-Taqsīm wa-al-Ṣabr)***

The foregoing proposition forms denote only one type of conditional arguments, namely the conjunctive. There is, however, another type of conditional argument known as disjunctive *(munfaṣil).* This type may be expressed in the following form.

Either *p* or *q*		Either *p or q*
Not *p*	or	Not *q*

Thus, *q* Thus, *p*

The above syllogism was adopted by classical Muslim *fuqaha'*, linguists, and logicians, and developed into an important procedure for justification. The procedure is known today in Western literature by the title "justification by elimination."[78] The procedure was succinctly described by al-Sikaki in his important work *Miftah al-'Ulūm: 'Al-Taqsim wa al-Sabr* [may be undertaken] by joining two, or a limited number, of names to the first name *(mubtada')*. One of the total set [of names] will be affirmed upon the negation of the rest. As you may say [for example]: Zayd is at home, or at the Masjid, or at the market. But he is neither at market, nor at the Masjid. Therefore he is at home. This type, when its division is sound, and its negation is true, provides *qaṭ'i (*certain) knowledge."[79] The general form of the procedure may be stated as follows:

D_1 or D_2 or D_3

Not D_1 and not D_2

Thus, D_3

For this procedure to be valid, two rules must be observed:

1. Division must be exhaustive. All possible classes must be included so that the examination applies to the whole range of possibility and not only to a part of it.
2. The total group must be divided by using the same principle.

Failure to observe the two conditions stated above could lead to grave errors. Using alSikaki's example to illustrate this point, the conclusion that Zayd is at home will be wrong if Zaid could be found in a place other than those stated in the antecedent.

Fallacies *(Mughālaṭāt)*

Fallacies result from two types of errors: linguistic and logical. The former arise when the rules of language are violated, the latter when the rules of reasoning are ignored. Let us briefly review some major examples of fallacies, beginning with the latter type.

Logical Fallcies (Maghālaṭāt Manṭiqiyah)

1. Fallacy of accident: this fallacy occurs when the accidental and superficial is confused with the essential and intrinsic, as when one concludes that white cars are the best racing cars because he happened to witness several white cars win car races.
2. Fallacy of the false cause: this fallacy occurs when causal linkage is assumed whenever succession occurs between two events.

Linguistic Fallacies

1. Fallacy of equivocation: this fallacy is also known as "semantic fallacy." This occurs when an expression (word or phrase) having more than one distinct meaning is used in an argument. For example:

   Whatever is sharp is pointed.
   Vinegar is sharp.
   Thus, vinegar is pointed.

2. Fallacy of ambiguous construction: Omar and his two close friends, Ali and Ahmad, were the best students in the class. The youngest of them, though by no means the brightest, happened to get the highest grade this time.

Induction *(Istiqra')*

The arguments discussed above employ deductive reasoning. Classical Muslim scholars employed in their arguments (*ḥujaj*) the procedure of istiqra' (induction). They, further, distinguished between two types of istiqra': istiqra' tāmm (complete induction) which produces *qaṭ'i* knowledge, and istiqra' *nāqiṣ* (incomplete induction) which gives a *ẓanni* or probable knowledge.[80]

We will discuss the procedures of istiqra' in detail in chapter 5; for now it suffices to state its general form:

S_1 is F
S_2 is F
S_n is F
Thus, S is F
or If S_{1-n} is F, then S is F

When n equals the total number of S, the induction is complete; but when n is less than the total number of S, the induction is incomplete.

THE THEORY OF MAQĀṢID AL-SHARĪ'AH: AN EARLY SYNTHESIS

For centuries, *qiyās* continued to be the primary procedure for extending the rules of the *Shari'ah* to new events (*waqa'i'*). Gradually, however, many Muslim scholars began to realize that the procedure suffered from at least two shortcomings. First, the extension of judgment is made between two particular objects. As al-Sakkākī realized in his *Miftāh al-'Ulūm*, that for the extension to be certain, one has to be certain that the property perceived to be shared by the two objects must be the true efficient cause (*'illah*) of the ruling. A condition, he noted, that can hardly be achieved through qiyās.[81] In addition to the absence of certainty, relying primarily on the procedure of *qiyās* to apply revealed injunctions to the evolving conditions of society leads to the fragmentation of the body of *Shari'ah* rulings since overarching principles are absent.

Yet, by the constant searching for the efficient causes of the rules of the *Sharī'ah,* the reasons for a significant body of *Sharī'ah* statements were explained by the turn of the seventh century. This enabled a brilliant Muslim scholar to introduce an ingenious theory. Ibrahim ibn Musa al-Shāṭ ibī formulated, in his work *al-Muwafaqāt,* the theory of *maqāṣid al-Sharī'ah* (purposes of *Sharī'ah).* The theory, despite its great potential for the systematization of the rules of *Sharī'ah,* had neither been developed nor implemented by subsequent Muslim scholars. Rather, it had been almost completely ignored until it was rediscovered by Muhammad 'Abduh less than a century ago.

Al-Shāṭibī's thesis may be summarized as follows. The particular (*juz'i*) rules of the *Sharī'ah* are governed by universal laws *(qawānīn kullīyyah).* These laws could be known by a comprehensive survey of the *Sharī'ah* statements. By resorting to the procedure of complete induction *(istiqra' kullī),* one can move from the particular rules to the universal laws of the *Sharī'ah. Al-Shātibī's* proposal amounted to nothing less than an extraordinary and profound shift in methodological procedures. This is because adopting *al-Shātibī's* procedures would immediately expand the scope of *ijtihād* from its early limitation of particular *qiyās,* to a comprehensive process in which both induction and deduction could be utilized. Induction would allow us to move from the particular to the general, while deduction permits the opposite movement from the general to the particular.[82]

Clearly, al-Shāṭibī was not the first Muslim scholar to use induction. Induction (istiqra') had been used since the early development of fiqh by various scholars. Al-Shāf'ī', for one, used it in his *Risālah* to show that the generality *('umūm)* and specificity *(khuṣūṣ)* of terms can only be determined when they are studied in a specific linguistic context. However, al-Shāṭibī was the first to include *istiqra'* as a methodical tool for deriving principles, and he was the first to integrate inductive and deductive reasoning into a unified methodology. Further, al-Shāṭibī openly called for the use of logical *qiyās* instead of *fiqhī qiyās* in legal reasoning. Before al-Shāṭibī, logical qiyās was used only in *kalām* and philosophical works, while only *tamthīli qiyās* was formally allowed in fiqh studies. By demonstrating the possibility, even the necessity, of a combined approach of induction and deduction for the systematization

of fiqh*,* al-Shāṭibī made the use of logical *qiyās* (syllogism) essential. Analyzing the structure of *Sharī'ah* inference, he stated:

> Every *Shari'ah* inference is predicated *(mabni)* on two premises. One belongs to the process of the realization of the efficient cause *(tahqiq al-manat)* of the judgment *(hukm).* The other belongs to the *Shari'ah* judgment itself. The former is theoretical. By theoretical I mean here that it is not narrative *(naqlīyah),* regardless of whether it is established by thought or by contemplation. Therefore, I do not mean to contrast the theoretical with the necessary. The second [premise] is narrative *(naqlīyah).* The application of this is evident in every shari'ah subject; it is even applicable to every subject, be it rational or narrative...[For example], when you say: every intoxicating [substance] is unlawful *(ḥarām);* a [substance] cannot be judged until it can be verified whether it can be used [because it is not intoxicating] or cannot be used. It is necessary therefore to check whether it is *khamr* (intoxicant) or not *khamr,* and this is the meaning of *tahqiq al-manat* (realization of the efficient cause).[83]

Al-Shāṭibī identified three levels of universal laws or rules *(qawā'id)*, which he referred to also by the term *maqāṣid* (purposes). At the top of the three tiers stand *al-maqāṣid al-ḏarūrīyyah* (necessary purposes). These are necessary because they are indispensable for the attainment of the "interests of religion and life," without which corruption and disorder would prevail.[84] He identified five necessary purposes of *Sharī'ah*: preservation of religion, life, progeny, property, and intellect. [85]

At the second level of the hierarchy of universal purposes *(maqāṣid kullīyyah)* of the *Sharī'ah* lay what al-Shāṭibī called *hajīyyat* (exigencies).He did not identify any of these principles, but argued that these were corollary principles intended to ease hardship and extreme difficulties which could lead to idleness and inactivity.

The third, and final, level of purposes consists of what al-Shāt|ibī called tahsiniyat (facilities). While the previous category is intended to eliminate the negative, this last category purports to reinforce and

promote the positive in the life of man. Here again al-Shātibī did not identify the detailed, or even the general, principles, but contended that this type "belongs to the area of virtue and morality."[86]

Al-Shāt|ibī further argued that unlike the rules of *Sharī'ah,* which are probable (*ẓanni*), the three sets of universal principles (*qawā'id*) he outlined are certain (*qat'i*). Certainty results from the accumulation of probable evidence (*dala'l ẓaniyyah*). Let us follow al-Shāt|ibī 's argument to see how he substantiated his claim:

> No one of the people of *ijtihād* in *Shari'ah* can be skeptical about the certainty of these three [sets] of principles [i.e. the necessities, exigencies, and facilities]. The proof of that [assertion] can be found in applying the principle of induction to the *Shari'ah,* and contemplating its particular and universal rules, so as to discover its general aspects. The [outcome of this] induction is confirmed not by individual evidence, but by the process of accumulation of evidence itself. [87]

The procedure suggested by al-Shāṭibī is neither static nor one-sided, for it involves successive application of both induction and deduction whereby the particular is constantly brought under the fold of the universal; at the same time, the universal is continuously corrected and refined by the particular. The dialectical process is defined by two interrelated rules:

> First, the conflict between the universal principles and few particular cases does not negate the former.
>
> Second, the universal should be modified, whenever feasible, to accommodate the particular.[88]

Clearly, the universal cannot be negated just because it could not account for a few cases, for a principle attains the level of universality only after a long and extensive process in which countless particular cases have substantiated and validated its truth. On the other hand, since the universal principle is obtained by contemplating the particular, the latter can never be ignored. The universal has to be modified so as to accommodate, and account for, particular cases. This modi-

fication contributes, undoubtedly, to the refinement of the universal principle.

CHAPTER 4

SCIENCE AND THE PROBLEMATIC OF METAPHYSICAL KNOWLEDGE

The translation of Greek sciences into Arabic, and the emergence of the science of kalām to defend Islam against the claims of Greek philosophy, especially in the area of divinity, forced Muslim scholars to examine the grounds of knowledge. *Kalām* scholars, *à la* al-Ghazālī, denied the Greek assertion that knowledge about metaphysical reality can be attained through rational argument. They presented a set of metaphysical propositions based on their understanding of Revelation. Ibn Rushd (Averroes), representing the Muslim philosophers, demonstrated, however, that the *kalām* scholars' derivations from the revealed source were flawed. The exchange between Ibn Rushd and al-Ghazālī, and the comments of subsequent Muslim scholars on parts of the debate, bring to the fore the problematic nature of metaphysical assertions.

In its broadest sense, metaphysics deals with the transcendental and supra-sensible, i.e., the unseen. As such, metaphysics encompasses all mental entities, including concepts such as eternity, afterlife, freedom, causality, etc. Therefore, only particular entities which can be apprehended through the senses would fall outside metaphysics. Yet, one may distinguish within the realm of metaphysics between general relations (e.g., causality, freedom of the will), and supra-sensible entities (e.g., angels, spirit, and afterlife). Metaphysics is more often associated with the latter items, and less often with the former.

LIMITATION OF RATIONAL ARGUMENTS

While both *falasifah* and *mutakallimūn* accepted Greek logic as a science, the latter rejected the substantive aspects of Greek philosophy,

especially the study of *ilahiyat* (divinity).[89] The tension between philosophy and *kalām* reached its apex in the theoretical exchange between two eminent Muslim scholars. Abū Ḥāmid al-Ghazālī who wrote his work *Tahāfut al-Falasifah* (*The Incoherence of the philosophers*) to repudiate the work of philosophers, especially in the realm of divinity, while Abū al-Walid ibn Rushd (Averroes) wrote his work *Tahāfut al-Tahāfut* (*The Incoherence of the Incoherence*), which could be equally entitled The Refutation of the *Mutakallimūn.*

Al-Ghazālī's major claim against the philosophers is that their judgments are based not on verified and certain knowledge, but on speculation and probability. Further, al-Ghazālī argues that the credibility of Greek metaphysics was not based on its own merit. Rather, its validity was predicated on the credibility of the Greek mathematical and logical sciences.[90]

He identified three areas in which *kalām* and philosophy may come into conflict: semantics, physics, and metaphysics (or divinity). While he warned Muslim scholars against a hasty rejection of philosophical knowledge on the basis of semantic disagreement over the usage of certain terms, or on the basis of apparent disagreement between Qur'anic statements and physical knowledge, he did not hesitate to assert what he regarded as an unredeemable contradiction between *uṣūl al-dīn* (principles of religion) and the rational study of Divinity (ilahiyat).[91]

It is beyond the scope of this study to review all the twenty points of rebuttal discussed in the *Tahāfut.* Rather, we will study one of the arguments to understand the basis of al-Ghazālī's objection. The first issue raised by al-Ghazālī against philosophers is entitled "Refutation of the belief of the eternity of the world." The approach al-Ghazālī employs in his rebuttal is to provide a full exposition of the philosophers' argument before he gives his refutation or counter-argument. We will follow al-Ghazālī's strategy and provide the philosophers' argument, as narrated by al-Ghazālī himself, before we set forth al-Ghazālī's own argument.

THE PHILOSOPHERS' ARGUMENT

In order to preserve al-Ghazālī's attitude towards the subject matter of Science and the Problematic of Metaphysical Knowledge and his mode of argument, we will quote extensively from his book, *Tahāfut al-Falasifah*, including the following succinct summary of the philosophers' argument:

> The procession of a temporal (being) from an eternal (being) is absolutely impossible. For, if we suppose the Eternal at a stage when the world had not yet originated from Him, then the reason why it had not originated must have been that there was no determinant for its existence, and that the existence of the world was a possibility only. So, when later the world comes into existence, we must choose one of the two alternatives (to explain it)—namely, either that the determinant has, or that it has not, emerged. If the determinant did not emerge, the world should still remain in the state of bare possibility, in which it was before. But if it has emerged, who is the originator of the determinant itself? And why does it come into being now, and did not do so before? Thus, the question regarding the origin of the determinant stands. In fine, since all the states of the Eternal are alike, either nothing shall originate from Him, or whatever originates shall continue to originate forever. For it is impossible that the state of leaving off should differ from the state of taking up.
>
> To elucidate the point, it may be said: why did He not originate the world before its origination? It is not possible to say: "Because of His inability to bring the world into existence;" nor could one say: "Because of the impossibility of the world's coming into being," For this would mean that He changed from inability to power, or that the world changed from impossibility to possibility. And both senses are absurd. Nor can it be said that, before the time of the origination of the world, there was no purpose, and that a purpose emerged

later. Nor is it possible to ascribe (the non-origination of the world before it actually originated) to the lack of means at one stage, and to its existence at another. The nearest thing to imagine is to say that He had not willed the world's existence before. But from this it follows that one must also say: `The world is the result of His having become a willer of its existence after not having been a willer.' So the will should have had a beginning in time. But the origination of the will in the Divine Being is impossible; for He is not subject to temporal events. And the origination of the will not-in-His-being cannot make Him a willer.

Even if we give up the inquiry concerning the substratum in which the will originated, does not the difficulty regarding the very act of origination stand? Whence does the will originate? Why does it originate now? Why did it not originate before? Does it now originate from a source other than God? If there can be a temporal existent which has not been brought into existence by anyone, then the world itself should be such an existent, so as to be independent of the Creator. For what is the difference between one temporal existent and another?

So, if the origin of the world is ascribed to God's action, the question remains: why now, and why not before? Was it due to the absence of means, or power, or purpose, or nature? If so, the transition from this stage to that of existence will revive the difficulty we had to face at the outset. And if it is said to have been due to the absence of will, then one act of will must stand in need of another, and so on ad *infinitum.* From this it is absolutely clear that the procession of the temporal from the eternal is impossible unless there were a change in the eternal in respect of power, or means, or time, or nature. And it is impossible to suppose a change in the states of the eternal. For as a temporal event, that change would be like any other change (in non-eternal beings). Therefore (in case

> of the eternal), change of any kind whatsoever is impossible. And now that the world has been proved (always) to have existed, and the impossibility of its beginning in time has been shown, it follows that the world is eternal.[92]

In order to understand the structure of the argument, and the basis of disagreement between al-Ghazālī, representing the *mutakallimūn,* and the philosophers, let us summarize the foregoing argument. Substituting the key statements of the argument with symbols we obtain:

G	:	God is Eternal
D	:	World is Eternal
W	:	God's will is Eternal
P	:	God's power is absolute

The main thrust of the argument can be stated as follows:

(1) If God is eternal, then His will is eternal and His power is absolute. or If G, then (W and P).

(2) If God's will is eternal and His power is absolute, the world is eternal,or If (W and P) then D.

(3) God is eternal, or G.

(4) His will is eternal and His power is absolute, or W and P.

(5) Thus the world is eternal, or Thus D.

Let us summarize the above argument:

(1) If G then (W and P),

(2) If (W and P) then D

(3) G

(4) W and P

(5) Thus D

AL-GHAZĀLĪ'S OBJECTION

Al-Ghazālī's objection to the philosophers' argumentation is not directed against the validity of its form or structure, but the truth of the second premise. Addressing the philosophers, he argues:

> How will you disprove one who says that the world came into being because of the Eternal Will which demanded its existence at the time at which it actually came into existence, and which demanded the non-existence (of the world) to last as long as it lasted, and (demanded) the existence to begin where it actually began? So, on this view, existence of the world was not an object of the Eternal Will, before the world actually existed; hence its non-actualization. And it was an object of the Will at the time when it actualized. What can prevent us from believing such a thing, and what is the contradiction involved in it?[93]

By replacing al-Ghazālī's stated premise in the foregoing argument with the philosophers' premise which appears in (2), we obtain:

If (W and P) then ~ D
The complete argument now takes the following form:

(1) If G then (W and P)
(2) If (W and P) then ~ D
(3) G
(4) W and P
(5) Thus ~D

Notice that the arguments of both the *falasifah* and al-Ghazālī are valid. The disagreement therefore boils down to the determination of whose version of premise (2) is true. Indeed here lies al-Ghazālī's main contention against the philosophers' assertion that the world is eternal. As he put it:

> How do you know the impossibility of ascribing the origin of something to an eternal will? Is it the self-evident rational necessity, or theoretical knowledge, *which is* the ground of your judgment? Or, to use the terms employed by you in logic, are the two terms in your judgment joined by means of a middle term, or without a middle term? If you claim that they are joined by means of a middle term —i.e., if your method is deductive — you must state what that term is. But if you claim that this impossibility is known as a self-evident fact, why do not your opponents share this knowledge with you? People who believe in the temporal origin of the world are confined neither to a number nor within a city. And no one would suspect that, out of spite for reason, they believe in something which they know to be untrue. It is, therefore, necessary for you to prove, in accordance with the rules of logic, that it is impossible to ascribe the origin of the world to the Eternal Will. All you have said so far only amounts to a suggestion of improbability, and to a comparison of the Divine Will to our inclination or will. The comparison is false; for the eternal will does not resemble temporal intentions. And the mere suggestion of improbability, unsupported by an argument, is not enough.[94]

Al-Ghazālī's objection is straightforward. The assertion that the world is eternal is neither justified on the basis of syllogism (for a middle term is lacking), nor is it a necessary truth which reason requires. Therefore, it stands on an equal footing with its negation. Al-Ghazālī brilliantly shows that the resolution of the conflict between the assertions of the philosophers and *mutakallimūn* cannot be made on the basis of logical argument, but on the basis of ontological truth. By so doing he exposed the limitation of logical arguments.

Al-Ghazālī's work provoked a strong response from another eminent scholar, Ibn Rushd. Ibn Rushd, a contemporary of alGhazālī, (d. AD 1198), sympathized with the *falasifah* rather than the *mutakallimūn*. In *Tahāfut al-Tahāfut* (The Incoherence of the Incoherence), Ibn Rushd

sets out to demonstrate that the *falasifah's* arguments were more credible than those of al-Ghazālī, and of the mutakallimūn in general. He does not completely disagree with al-Ghazālī in his refutation of the *falasifah,* nor does he completely support their arguments. On many occasions he furthers al-Ghazālī's refutation of the *falasifah* even when he tries to show that al-Ghazālī's arguments are *not* valid.[95] Ibn Rushd thus defended the *falasifah* on the ground that while the soundness *(sidq)* of the arguments may be doubted, their validity (*ṣiḥḥah*) may not.

Ibn Rushd's defense of the *falasifah* does not detract from al-Ghazālī's claim that their metaphysical assertions were mere speculation *(zann)*. His main contribution however was to show that the arguments of the *mutakallimūn* were purely speculative as well, and hence could not produce certain (*qat'i*) knowledge. Ibn Rushd takes al-Ghazālī to task by showing that the arguments the latter submitted to demonstrate that the world has an origin in time were unfounded. He also takes the *mutakallimūn* to task for insisting that the world was created from nothing, thereby contradicting revealed evidence that it was created from previously existing matter.

To show how Ibn Rushd demonstrates that the methods of the *mutakallimūn* do not rise to the level of rigorous science, we will look into how he responds to their proof of the origination of the world. We will begin with his refutation of al-Ghazālī's proof, then move to discuss his objection to the entire approach of the *mutakallimūn.* Following is al-Ghazālī's argument and Ibn Rushd's rebuttal:

> [Al-Ghazālī says]: How will you refute your adversaries when they say the eternity of the world is impossible, for it implies an infinite number and an infinity of unities for the spherical revolution, although they can be divided by six, by four, and by two.[96]
>
> For the sphere of the sun revolves in one year, the sphere of Saturn in thirty years, and so Saturn's revolution is a thirtieth, and Jupiter's revolution (for Jupiter revolves in twelve years) a twelfth of the sun's revolution. But Saturn proportion of

one to thirty and even the infinity of the sphere of the fixed stars which turns round once in thirty-six thousand years is the same as the daily revolution which the sun performs in twenty-four hours. If now your adversary says that this is plainly impossible, in what does your argument differ from his? And suppose it is asked: are the numbers of these revolutions even or uneven or both even and uneven or neither even nor uneven? If you answer, both even and uneven, or neither even nor uneven, you say what is evidently absurd. If, however, you say 'even' or 'uneven', even and uneven become uneven and even by the addition of one unit and how could infinity be one unit short? You must, therefore, draw the conclusion that they are neither even nor uneven.

I [Ibn Rushd] says:

This too is a sophistical argument. It amounts to saying: In the same way as you are unable to refute our arguments for the creation of the world in time, that if it were eternal, its revolutions would be neither even nor uneven, so we cannot refute your theory that the effect of an agent whose conditions to act are always fulfilled cannot be delayed. This argument aims only at creating and establishing a doubt, which is one of the sophist's objectives.

But you, reader of this book, have already heard the arguments of the philosophers to establish the eternity of the world and the refutation of the Ash 'aris. Now hear the proofs of the Ash'aris for their refutation and hear the arguments of the philosophers to refute those proofs in the wording of Ghazālī!

I say:

This is in brief that, if you imagine two circular movements in one and the same finite time, and imagine then a limited part of these movements in one and the same finite time, the proportion between the parts of these two circular movements and between their wholes will be the same. For

> instance, if the circular movement of Saturn in the period which we call a year is a thirtieth of the circular movement of the sun in this period, and you imagine the whole of the circular movements of the sun in proportion to the whole of the circular movements of Saturn in one and the same period, necessarily the proportion between their wholes and between their parts will be the same. If, however, there is no proportion between two movements in their totality, because they are both potential, i.e., they have neither beginning nor end but there exists a proportion between the parts, because they are both actual, then the proportion between the wholes is not necessarily the same as the proportion between the parts — although many think so, basing their proof on this prejudice — for there is no proportion between two magnitudes or quantities which are both taken to be infinite. When, therefore, the ancients believed that, for instance, the totality of the movements of the sun and of Saturn had neither beginning nor end, there could be no proportion between them, for this would have implied the finitude of both these totalities, just as this is implied for the parts of both. This is self-evident. Our adversaries believe that, when a proportion of more and less exists between parts, this proportion holds good also for the totalities, but this is only binding when the totalities are finite. For where there is no end there is neither more nor less.[97]

Al-Ghazālī's argument may be summarized as follows:

(1) If the world was eternal, then the spherical revolutions of the celestial bodies should be equal.
(2) The spherical revolutions of the celestial bodies are not equal.
(3) Thus the world is not eternal.

Substituting variables for the foregoing statements, the argument can be written in the following form.

W : The world is eternal

R : The spherical revolutions of the celestial bodies are equal

(1) If W then R

(2) – R

(3) Thus –W

The above argument is logically valid. Ibn Rushd's objection is not directed at its logical form, but rather at its substantive truth. The contention of the two scholars is over whether or not the conditional proposition is true. Al-Ghazālī's contention is that since the proportion of the spherical revolution of one celestial body to that of another is at variance, the claim that the world is eternal cannot be sustained. Ibn Rushd's response is that the variance in proportion of the revolution of celestial bodies loses its significance as we move toward infinity. Fifth or sixth infinity makes no difference, for they all amount to infinity. Ibn Rushd successfully shows that al-Ghazālī's negation of the eternity of the world was mathematically ungrounded.

Ibn Rushd is not satisfied with showing that al-Ghazālī's refutation of the philosophers is ungrounded, but goes on to demonstrate that the claim of the *mutakallimūns* that the world was created from nothing is at variance with both human experience and Divine Revelation. He writes:

> Now, having assumed that the heavenly body has been produced, they [the *mutakallimūn*] supposed that this production had taken place in quite a different way from what is understood by production in the empirical world. In the empirical world, namely, things are produced from something, in time and space, and with a definite quality, not in their totality. Hence, in the empirical world there is no production of a body from that which is not a body. Nor did they suppose its agent to act like an agent in the empirical world, for the empirical agent changes one quality in the existent

> into another; it does not change absolute non-existence into existence—no, it brings the existent into a form and an intelligible quality through which this existent *becomes* another existent instead of this, different from it in substance, definition, name, and act, as it is expressed in the Divine Words; 'We have created man from [an extract of] clay, then We made him a clot in a sure depository, then We created the clot congealed blood, and we created the congealed blood a morsel, etc.' It is for this reason that the ancient philosophers believed that the absolute existent neither comes into existence nor can be destroyed.
>
> Now, if one concedes to the *mutakallimūn* that the heavens were created in time, they are unable to prove that they are the first of created things, as is the evident meaning of what is said in the Venerable Book in more than one verse, for instance, in the Divine Words, 'Do not the unbelievers see that the heavens and the earth were joined together?' and in the words, 'and His throne was upon the water,' and in the words, 'then He made the heaven and it was but smoke.'[98]

Evidently, Ibn Rushd is more interested in underlining the errors of al-Ghazālī, and the *mutakallimūn* in general, than in defending the *falasifah.* For he does not shy away from pointing out what he refers to as the prevarications (*shana'at*) of the *falasifah,* along with those of the mutakallimūn.[99]

Yet he seems to be particularly critical of the *mutakallimūn's* approach to learning and science, accusing them of being more interested in persuading the masses, and gaining popular support, than in pursuing truth.[100]

REASON WITHOUT CAUSALITY

Ibn Rushd's refutation of the *mutakallimūn, à la* al-Ghazālī, is not confined to the mode of argument they employed in the study of divinity, but also to the one they used for understanding nature. In the *Tahāfut al-Falasifah*, al-Ghazālī, though accepting natural sciences studied

by the *falasifah*, rejects four notions the philosophers utilized in their study. One of these notions is the principle of causality.[101] Al-Ghazālī rejects in particular the existence of necessary connection between cause and effect. As he puts it:

> In our view, the connection between what are believed to be the cause and the effect is not necessary. Take any two things. This is not That; nor can That be This. The affirmation of one does not imply the affirmation of the other; nor does its denial imply the denial of the other. The existence of one is not necessitated by the existence of the other; nor its non-existence by the non-existence of the other. Take for instance any two things, such as the quenching of thirst and drinking; satisfaction of hunger and eating; burning and contact with fire; light and the rise of the Sun; death and the severance of the head from the trunk; healing and the use of medicine; the loosening of bowels and the use of a purgative, or any other set of events observed to be connected together in Medicine, or Astronomy, or Arts, or Crafts. They are connected as the result of the Decree of Allah (High is He), which preceded their existence. If one follows the other, it is because He has created them in that fashion, not because the connection in itself is necessary and indissoluble. He has the power to create the satisfaction of hunger without eating, or death without the severance of the head, or even the survival of life when the head has been cut off, or any other thing from among the connected things (independently of what is supposed to be its cause).[102]

So while accepting natural sciences, al-Ghazālī denies the very principle which makes the study of nature possible. Evidently, al-Ghazālī's rejection of the principle of causality is motivated by his fear that one's believing in causality would undermine his faith in God as the ultimate author of all things. He therefore insisted that the act of burning cannot be attributed to the fire, which after all is a mere substance lacking the will to act. The act of fire has to be attributed, therefore, to God or to angels acting in His behalf. As he puts it:

> This is what we deny. We say it is God who — through the intermediacy of angels, or directly — is the author of the creation of blackness in cotton; of the disintegration of its parts, and of their transformation into a molding heap or ashes. Fire, which is an inanimate thing, has no action. How can one prove that it is an agent? The only argument is from the observation of the fact of the burning at the time of contact with fire. But observation shows that one occurs with the other, not that it is by it, having, hence, no other cause.[103]

Al-Ghazālī's rejection of causality is predicated on two arguments. First, that there is no logical connection between the cause and the effect; a necessary connection requires that a third entity is produced. Secondly, that observation can only establish a correlation, but not causation between the antecedent event or object and the consequent. This argument will be repeated later by a Western thinker, David Hume, who will deny the necessary connection between cause and effect, but for completely different reasons. While Hume denied the necessity of causation because he adopted a purely empirical mode of thinking, refusing to admit any metaphysical arguments into science, al-Ghazālī rejected the same necessity because he feared that by admitting the necessity of causation he would have to reject the possibility of miracles. If the causality is a necessary principle, how would anyone be able to explain the survival of Abraham after he was thrown by his people into a burning fire?[104]

Yet realizing that a complete rejection of the principle of causation could lead to absurdity, he invoked the concept of habituation (*'adah*). The connection between the cause and effect is not necessitated by something intrinsic to them, but is posited in the human mind as a result of the act of repetition. Al-Ghazālī again:

> If it is said: this [denial of causality] might lead one to entertain the most egregious absurdities. Once it is denied that effects necessarily follow from causes, and if it is maintained that an effect is to be ascribed to the Will of the Creator, and

> that the will itself has no particular welldefined course, but that its manifestations may be varied and arbitrary, then each one might persuade himself to believe that....One who left a book in his house might return to find it transformed to an intelligent and resourceful boy [and vice versa].
>
> In reply to the foregoing, we will say: If you could prove that in regard to things which 'can exist' there cannot be created for man a knowledge that they 'do not exist,' then these absurdities would be inescapable. We have no doubt in regard to the situations described by you. For Allah has created for us the knowledge that He would not do these things, although they are possible. We never asserted that they are necessary. They are only possible—i.e., they may, or may not, happen. It is only when something possible is repeated over and over again so as to form the Norm (*`adah*), that its pursuance of a uniform course in accordance with the Norm (*'adah*) in the past is indelibly impressed upon our minds.[105]

Al-Ghazālī's denial of causality was received with alarm by Ibn Rushd. For he regarded al-Ghazālī's contention to be not only unnecessary for recognizing God as the ultimate author of creation, but to be quite dangerous as well. To Ibn Rushd, denying causality would tantamount to denying the very structure of human reason, and hence knowledge as a whole. Thus he wrote:

> Now intelligence is nothing but the perception of things with their causes, and in this it distinguishes itself from all the other faculties of apprehension; and he who denies causes must deny the intellect. Logic implies the existence of causes and effects, and knowledge of these effects can only be rendered perfect through knowledge of their causes. Denial of causes implies the denial of knowledge, and denial of knowledge implies that nothing in this world can be really known, and that what is supposed to be known is nothing but opinion, that neither proof nor definition exist, and that the essential attributes which compose definitions are void.[106]

Ibn Rushd saw no contradiction between believing in the Creator as the ultimate cause and source for all action and event, and accepting the necessity of causal relations. Things have properties and effects after all because they were created and given their properties and effects by God. As he put it:

> And, as we said, we need not doubt that some of these existents cause each other and act through each other, and that in themselves, they do not suffice for their act, but that they are in need of an external agent whose act is a condition of their act, and not only of their act but even of their existence.[107]

The danger that Ibn Rushd saw in the trend represented by alGhazālī lies in the attempt to deny the diverse and multi-faceted nature of reality. If things are denied their individual existence and intrinsic properties, then differentiation and stratification of reality become superfluous. As a result, science will eventually be reduced to the science of divinity. Ibn Rushd wrote:

> And further, what do the *mutakallimūn* say about the essential causes, the understanding of which alone can make a thing understood? For it is self-evident that things have essences and attributes which determine the special functions of each thing and through which the essences and names of things are differentiated. If a thing had not its specific nature, it would not have a special name nor a definition, and all things would be one -- indeed, not even one.[108]

Finally, Ibn Rushd takes al-Ghazālī to task by analyzing the meaning of the term *ᶜadah* (norm) which the latter invoked in order to account for the tendency to assign necessary relationships between objects. Ibn Rushd argues that *ᶜadah* (norm) could be seen as the attribute of the Actor (*al-fā'il*)—i.e. the Divine whose act is manifested in nature, the things of nature, or the human mind. First, *ᶜadah* cannot be attributed to the Divine Being, for *ᶜadah* signifies mere behavior in which the actor is unconscious of the purpose and function of the act.

The pattern of the Divine act is, on the other hand, purposive, aiming at the realization of specific ends. The Qur'an refers to the Divine patterns by the term *Sunnah* which signifies a well-designed law.[109] Second, *ᶜadah* cannot be attributed to objects, for objects do not have will of their own to begin with. The pattern of material objects should be attributed to their nature (*ṭabīʻah*), i.e. to their intrinsic properties. Finally, *ᶜadah* may be attributed to the manner by which we judge objects. But then this alleged *ᶜadah* would be nothing other than the act of human reasoning per se, and hence the very essence of human intellect. If *ᶜadah* is used in the latter sense, then it is meant to equivocate the principle of causality as an intrinsic aspect of human reasoning.[110]

Ibn Rushd's warning that the rejection of causality amounts to a rejection of reason itself was not without justification. For while it is an exaggeration on the part of Ibn Rushd to equate reason with causation, the principle of causality is undoubtedly an important principle of reasoning, especially with regard to understanding nature. Indeed by undermining causality the *mutakallimūn* destroyed the foundation of rational sciences; hence science was gradually reduced to shari'ah and kalam sciences, while non-*sharīʻah* sciences were valued only insofar as they were considered to serve the *sharīʻah* sciences. This legalistic tendency, the equation of science with legal science, is apparent in the writing of leading Muslim scholars who were influenced by the Ashʻari system. This legalism can be discerned in the writings of al-Ghazālī himself. In his *Mustaṣfā,* al-Ghazālī divided sciences into three categories; rational *(aqli),* narrative *(naqli),* and rational-narrative, and declared the rational to be useless. As he put it:

> Sciences are of three types. Purely rational, which the *sharīʻah* does not encourage or require, such as arithmetic, geometry, astronomy, and the like; these sciences [may be divided in turn into] useful but based on false speculation (and sometimes speculation is sin); and useless, though it may be predicated on truth.... [The second type is] purely narrative, like hadith, or *tafsir,* or rhetoric (*khitab*)...
>
> [Finally] the noblest of sciences is the one that combines

> both the rational and narrative, and joins both opinion and Revelation *(sharʿi),* and the sciences of fiqh and its principles and of this kind.[111]

The antagonistic attitude toward rational sciences which we can discern in al-Ghazālī's works was elevated into an intellectual principle in al-Shāṭibī's writings. In discussing the fifth prelude in his *Muwāfaqāt*, al-Shāṭibī declared that "discussing a matter which does not lead to action is a discussion of something the *Sharīʻah* does not approve."[112] He went on to explain his statement by arguing that studying all kinds of subjects for the purpose of gaining knowledge about them is something that a Muslim should reject and avoid because it is contrary to the *Sunnah*. He further proclaimed that this kind of research was the "practice of the philosophers who are condemned by the Muslims."[113] Anticipating that his argument could be objected to on the basis that Islam requires learning and science, he claimed that this requirement was limited to learning and the study of questions connected with action.[114]

CRITIQUE OF GREEK LOGIC

We saw above that the *mutakallimūn* were able to appropriate Greek logic and use it successfully as a weapon to undermine the project of Muslim philosophers. But while the *mutakallimūn* were able to stop the penetration of Greek culture with its polytheist values and symbols, they undermined the philosophers' scientific accomplishments in medicine, mathematics, physics, and other sciences at the same time. This is because the *mutakallimūn* limited the role of reason to defending the faith rejecting its positive employment outside the realm of *Sharīʻah.*

The validity and usefulness of the intellectual principles adopted by the *mutakallimūn* were later questioned by Ibn Taymiyyah, who affirmed causality as a principle intrinsic to human reasoning, and rejected the Ash“ari notion that the properties and effects of objects should be ascribed to the free act of the Divine Being not to the nature of the object itself. He wrote:

> There are people who deny properties (taba'i^c) and effects (*qiwa*), as Abu al-Hassan [al-Ash'ari] and those who followed him from Malik's, al-Shafi'i's, and Ahmad's schools. These people who deny properties and effects [also] deny causes, saying: "Allah brings the effect of a cause with it (*'indahu*), but not by it (*bihi*)." Hence they say: "Allah does not satisfy hunger by bread, or thirst by water; nor does He grow plants by water, but does that with it (*'indahu*), but not by it (*bihi*)." These people contradict the Qur'an, *Sunnah*, and the consensus (*ijma'*) of early Muslims (*salaf*), and contradict reason and senses. For Allah said in His Book: "And He it is Who sends the winds as heralds of glad tidings, going before His Mercy: when they have carried the heavy-laden clouds, We drive them to a land that is dead, make rain to descend by (*bihi*) them, and produce every kind of harvest by (*bihi*) them: thus shall We raise up the dead: Perchance you may remember."[115] So [Allah] told us that He causes water to descend by the clouds, and causes the fruits to grow by the water. He (s.w.t) [further] said: "In the rain which Allah sends down from the skies, and the life which He gives there by (*bihi*) to an earth that is dead."[116] And said: "And We send down from the sky rain, charged with blessings, and We produced thereby (*bihi*) gardens and grain for harvests."[117] And said: "Fight them, and Allah will punish them by (*bihi*) your People know by their hands..." People know by their senses and reason that some things are causes of others, as they know that satisfying hunger is the result of eating, not counting; and that it happens by eating food, not by eating stones.[118]

Ibn Taymiyyah rejected, however, the notion put forward by al-Ghazālī that logic is an essential and necessary science. He argued that while logic is not completely void of sound principles, it includes many unsound and unfounded principles. Ibn Taymiyyah contended that the study of logic should not be required of the students of science

not only because it includes unfounded notions, but also because the sound principles of logic are innate to human reasoning. The principles of reason, he concluded, are known to all people, hence requiring no special training within an independent science.[119] Ibn Taymiyyah's basic critique of logic may be reduced to the following three points:

First, reducing reasoning to three processes, syllogism, induction, and analogy, and rejecting other methods of reasoning is not warranted for logicians have not proved that the intellect cannot employ other processes for acquiring knowledge. Ibn Taymiyyah argued that inference is not limited to these three processes whereby the inference is made from the particular to the universal (induction), from the universal to the particular (deduction), or from the particular to the particular (analogy). He proposes another process in which the inference is made by considering the relationship between two particulars which, unlike analogy, does not have any internal commonality. The example he cites for this type of inference is the knowledge a person may gain concerning the sunrise by observing the brightness of the day. Although Ibn Taymiyyah did not provide a name for this type of knowledge, it is clearly knowledge based on a causal relationship.

Secondly, the knowledge gained by using logic does not necessarily represent knowledge about reality, but it could be purely subjective knowledge. That is, Ibn Taymiyyah contends that logic lacks the method needed for verifying the correspondence between words and objects. Defining the linguistic terms is good only insofar as it brings precision to the language of science, but it does not establish the truth of linguistic terms. As he put it: "Definition does not help in conceptualizing the facts, but only in distinguishing one definiens from another."[120]

> Finally, although the operation of logic brings about "certain (qaṭʿi) knowledge, one need not learn this operation under a separate science of logic since these processes are self-evident."[121]

IBN KHALDŪN'S CRITIQUE

Like al-Ghazālī and Ibn Taymiyyah, Ibn Khaldūn rejected Greek philosophy. However, in refuting philosophy, Ibn Khaldūn, unlike al-Ghazālī, did not concentrate on substantive issues, but directed his critique to its method. He contended that logic, as a tool and method of reasoning, is inadequate for studying both nature and divinity. To demonstrate the truth of his judgment, Ibn Khaldūn provided a succinct and penetrating summary of the basic structure of logic. In a chapter entitled "The Refutation of Philosophy and the Incoherence of its Adherents" in his *Muqaddimah,* he summarized logic as follows:

> They [falasifah] did research on the (problem of perception). With great energy, they tried to find the purpose of it. They laid down a norm enabling intellectual speculation to distinguish between truth and falsehood, and called it logic. The quintessence of it is that the mental speculation which makes it possible to distinguish between true and false, take the form of ideas abstracted from individual existents. From these individual existents, one first abstracts pictures that conform to all individual existents, just as a seal conforms to all the impressions it makes in clay or wax. The abstractions derived from the sensible are called primary intelligibles. These universal ideas may be associated with other ideas, from which, however, they are distinguished in the mind. Then, other ideas, namely those that are associated and have ideas in common with the primary intelligibles, are abstracted from them. Then, if still other ideas are associated with them, a second and third abstraction is made, until the process of abstraction reaches the simple universal ideas, which conform to all ideas and individual existents. No further abstraction is possible. They are the highest genera. All abstract (ideas) that are not derived from the sensible serve, if combined with each other, to produce the sciences. They are called secondary intelligibles.

> The mind studies these abstract intelligibles and seeks through them to perceive existence as it is. For this purpose, the mind must combine some of them with others or keep them apart with the help of unequivocal rational argumentation. This should give (the mind) a correct and conformable perception of existence, if the (process) takes place according to a sound norm, as mentioned before.[122]

According to the insightful picture drawn by Ibn Khaldūn, logic aims at constructing a conceptual system in which concepts are formed by abstracting from the concrete and particular, i.e., the empirical (*mahsus*). The universal and abstract (*mujarrad*) concepts constructed by the human mind are the elements thatthe human intellect uses to understand reality. Ibn Khaldūn contends, however, that deductive reasoning, which takes the form of arguments and syllogisms, and which constitutes the essence of Greek logic, is inadequate for the study of both natural and metaphysical phenomena. Deductive reasoning, the cornerstone of Greek logic, is inadequate for studying nature because it lacks the mechanisms which may relate mental constructs to empirical objects and verify the correspondence between the universal concepts of reason and the concrete facts of reality.

> The inadequacy (*quṣūr*) of natural science lies in the uncertainty of the correspondence between the mental conclusions derived through the means of terms (*ḥudūd*) and syllogisms (*aqyisah*), as they contend, and what exists outside (the mind). This is because the mental judgments are universal and general, whereas the external objects are concrete and substantial. It is possible that the substance (of these objects) could have some (properties) which would make the correspondence between the universal and general to the concrete impossible.[123]

The inadequacy of Greek logic becomes more conspicuous when logical rules are used to verify the existence of metaphysical beings and understand their essence. This is because of the lack of connection

between thought and being even at the level of simple apprehension. For in this case, the categories the mind uses to contemplate the metaphysical are derived from the empirical reality. Therefore, using Greek logic to understand the metaphysical world is more problematic than it is in the case of the empirical world, for here not only are we unable to establish the correspondence between propositions and reality, but we also lack even the means for verifying the existence of metaphysical objects themselves. As he put it:

> As to the existents which lie beyond our senses, i.e. the spiritual or what is known as the science of divinity and the science of metaphysics, these are completely unknown. Nor can we have access to them or prove their existence because the derivation of the mental from the concrete beings which have objective reality is only possible in the case of what we can apprehend; but since we do not apprehend spiritual beings, we cannot abstract concepts of things we do not sense; nor can we prove or establish their existence, except perhaps by introspective knowledge of our own human spirit. But even then a great deal of ambiguity regarding the essence and properties [of the spirit] remains.[124]

Conclusion to Part II

We reviewed in the last three chapters the basic contributions of Muslim scholars to the study of methodology. In the period separating the publication of al-Shāfi'ī's *Risālah* and a1-Shāṭ ibī's *Muwafaqāt,* the Muslim intellectual tradition underwent a remarkable development. The methodological advancement of Muslim scholarship was not limited to the refinement of the methods of textual inference and interpretation, but underwent a profound evolution culminating in the approach embodied in the theory of. By building on the strength of Greek logic, and by incorporating inductive reasoning into textual analysis, al-Shāṭ ibī was able to transform *usūl alfiqh* into a highly systematic methodology. Unfortunately, al-Shāṭ ibī's *maqās|id* approach matured while Muslim intellectualism was on the decline. Al-Shāṭ ibī had no following, and his work remained obscure till recent times when few contemporary Muslim scholars showed interest in his work, most notably Muhammad bin Ashur.

Yet the concise review of classical Muslim methods we attempted above shows clearly that early scholars were primarily concerned with textual analysis and the systematization of textual inference. One can hardly find any discussion of methods aimed at analyzing or interpreting action. And while Muslim scholars were not oblivious to the importance of studying social and political interaction and produced many important works dealing with political relations, their approach was based for the most part on insight and personal experience. Perhaps the only exception to the above description of Muslim scholarship was the work of Ibn Khaldūn. But like al-hāṭ ibī, Ibn Khaldūn represented an extraordinary moment of intellectual insight, completely detached from his intellectual surrounding.

We may conclude in light of the foregoing remarks that while classical Muslim methods can contribute a great deal to the current efforts aimed at reestablishing a distinctively Islamic methodology for social research, especially in the area of textual inference, they are of

little help in the area of action analysis and inference. Here modern Western scholarship can be utilized after being subjected to a critical examination. This examination is the task of the next two chapters.

Part III

MODERN WESTERN METHODS

Prelude to Part III

The major problem we encounter in evaluating Western scientific methods is quite the opposite of the problem with scientific methods developed by classical Muslim scholars. While the latter showed little interest in devising methods for analyzing social actions, the former have been oblivious to Revealed Truth and its significance in providing an ethical and ontological foundation for scientific research.

In addition to pointing out the imbalanced development of Western methodology, as manifested in its naturalistic tendencies, the next two chapters provide a succinct analysis of the various inductive methods advanced by modern Western scholarship.

5 CHAPTER

EMPIRICAL ANALYSIS:

Rules of Inductive Inference

We saw in the previous chapter that Muslim scholars rejected, by and large, Greek philosophy's contention that metaphysics can be completely and exclusively grounded in rationality. We saw also that some Muslim scholars, most notably Ibn Taymiyyah and Ibn Khaldūn, questioned the value of Greek logic as a useful method of scientific thinking.

Muslim misgivings about Greek logic were later echoed by Western thinkers around the fifteenth century. The earliest attempt to provide an alternative methodology by Western scholarship was made by the English philosopher Francis Bacon (1561-1626). In *Novum Organum* (1620), Bacon accused the logicians of his day of relying exclusively on the deductive method and using syllogistic reasoning while ignoring inductive approaches. He claimed that even when logicians use induction, they do not employ well-thought-out and designed methods, but rely on crude induction, and apply it in a hasty and careless manner. He therefore decried "demonstration by syllogism, as acting so confusedly, and letting nature slip out of its hands."[125]

Bacon contended that deductive reasoning, that is reasoning through syllogism, was a vulgar form of thinking that should be confined to "popular arts, and such as matters of opinion."[126] Science, on the other hand, can employ only one mode of reasoning, namely induction. This is because "the intellect," he insisted, "is not qualified to judge except by means of induction, and induction is its legitimate form."[127]

Further, Bacon identified two distinct sets of principles that the intellect employs to understand reality. One is innate, and hence inherent in the very structure of the human mind; the other comes from without,

that is from external nature. Bacon argued that principles which are innate to the human mind cannot be trusted because they are subject to errors and distortions. As he put it:

> But the innate [ideas] are inherent in the very nature of the intellect, which is far more prone to error than the sense is. For let men please themselves as they will in admiring and almost adoring the human mind, this is certain: that as an uneven mirror distorts the rays of objects according to its own figure and section, so the mind, when it receives impressions of objects through the senses, cannot be trusted to report them truly, but in forming its notions mixes up its own nature with the nature of things.[128]

The foregoing statement establishes in no equivocal terms what has become known today as the principle of empiricism. Although Bacon does not completely rule out the idea of innate thoughts inherent in the human mind, he explicitly considers innate ideas to be unreliable. The only thinking process that can be trusted, Bacon asserts, is induction; therefore he moves on to expound an elaborate procedure for discovering the true nature of things.

The procedure of induction expounded by Bacon consists of three steps. First, all the instances (or circumstances) that are present when a specific phenomenon is present are listed in a table which Bacon calls the Table of Presence. Second, all instances that are absent when the same phenomenon is absent are listed in another table, the Table of Absence. Finally, a process of 'rejection and exclusion' is undertaken so as to identify those instances that are always associated with the phenomenon being studied. To do this, one has to first exclude those instances which are present when the phenomenon is absent, those which are absent when the phenomenon is present, and those which increase (or remain unchanged) when the phenomenon decreases, and vice versa. Those instances which remain after the process of rejection and exclusion is completed constitute the "form" of the phenomenon. As he put it:

> The first work therefore of true induction (as far as regards the discovery of forms) is the rejection or exclusion of the several natures which are not found in some instance where the given nature is present, or are found in some instance when the given nature is absent, or are found to increase in some instance where the given nature decreases, or to decrease when the given nature increases. Then indeed after the rejection and exclusion has been duly made, there will remain at the bottom, all light opinions vanishing into smoke, a form affirmative, solid and true and well defined.[129]

The induction process epitomized in the above passage is a compound one, consisting of three distinct procedures. These procedures have been further developed by John Stuart Mill (1806-1873) who discussed them in his *A System of Logic* (1843) under the labels "The Method of Agreement," "The Method of Difference," and "The Method of Concomitant Variation." To these Mill added two other Methods: "The Joint Method of Agreement and Differences," and "The Method of Residues."

Before we discuss in some details the five methods of induction expounded by J.S. Mill, we need to quickly identify the shortcomings of the classical process of induction criticized by Bacon. This method may be labeled induction by simple enumeration. As we saw in chapter three, the basic structure has the following pattern:

S_1 is F
S_2 is F
S_n is F

Hence, S is F

This approach produces misleading results if the objective was to identify the instances that confirm the association of S and F while completely overlooking instances which disconfirm it (exceptions). A valid induction must consider both positive (confirming) and negative (disconfirming) instances because it takes only one disconfirming instance to reject the association between S and F. Consider the follow-

ing example: Zayd visited his next-door neighbor one day last year; his grandmother died the next day. Then he visited him two weeks ago; the next day his uncle died. He went yesterday to see him; today his cousin died. Zayd concluded that visiting his next-door neighbor brings bad luck.

THE METHOD OF AGREEMENT

The objective of this method is to identify the circumstance that is always present when the phenomenon is present. To achieve this objective, there must be a sufficient number of instances wherein other possible causes of the same phenomenon are absent. Mill put the general formulation of this method in the following terms:

> If two or more instances of the phenomenon under investigation have only one circumstance in common, the circumstance in which alone all the instances agree, is the cause (or effect) of the given phenomenon.[130]
>
> The basic structure of this method may be presented as follows:
>
> A B C D occur together with *w x y z*
>
> A E F G occur together with *w t m n*
>
> Thus, A is the cause (or effect) of w

Table 1

Instance	Antecedent Circumstance	Phenomenon
1	S F I	P
2	S B I	P
3	S B F I	P
4	S F I	P
5	S B F	P

To illustrate how this method is applied, let us consider the following example. Five cases of food poisoning were reported in a small town. The investigator assigned to investigate these cases discovered that all of the five persons ate their last meal at the same restaurant. To identify the source of poisoning, the investigator interviewed the five patients and found that they ate some combination of the following four items: salad, beef, fish, and ice cream. The combination of food items eaten by each of the five patients is summarized in the table above. S, B, F, and I stand for salad, beef, fish, and ice cream respectively while P stands for the phenomenon of food poisoning.

From the data given in the above table, we find that the circumstance I is the only one which is always present when P is present. We may conclude, therefore, that ice cream (I) is the cause of food poisoning (P).

Although the above example worked well to illustrate the method, real-life cases do not always provide a convenient distribution of data. To recognize the limitation of this method one needs only assume that all the patients ate salad or fish along with the ice cream. In this new scenario, one can hardly pinpoint the actual cause of poisoning. For it could possibly be the ice cream, the fish, or their combination.

THE METHOD OF DIFFERENCE

The objective of The Method of Difference is the opposite of that of The Method of Agreement. For here we try to identify the circumstance which is always absent when the phenomenon is absent. However, here we only need to establish one instance where one of all possible causes of the phenomenon is absent when the phenomenon is absent in order to establish causal relation. Mill stated this method in the following terms:

> If an instance in which the phenomenon under investigation occurs and an instance in which it does not occur, have every circumstance in common save one, that one occurring only in the former, the circumstance in which alone the two instances differ, is the effect, or the cause, or a dispensable part of the cause, of the phenomenon.[131]

The Method of Difference has the following structure:

A B C D	occur together with	*w x y z*
B C D	occur together with	*x y z*

Thus, A is causally connected with w

To illustrate how this method works we can use the same example we used to illustrate The Method of Agreement. Suppose that the investigator was able to find a customer of the same restaurant who ate the same four items which the poisoned patients ate except the ice cream (I) and did not suffer food poisoning. Using the same abbreviations as in Table 1, and using the letter I to denote this new instance, we can obtain the following table:

Table 2

Instance	Antecedent Circumstance	Phenomenon
1	S F I	P
2	S B I	P
3	S B F I	P
4	S F I	P
5	S B F	P

We can conclude from the above table that I (ice cream) is the cause of the food poisoning (P).

JOINT METHOD OF AGREEMENT AND DIFFERENCE

As the name of this method suggests, it combines both the first and the second method identified by Mill. As such, this method cannot be regarded as a separate method from the first two. The general structure of this method is naturally the combination of the structures of the two early methods.

ABC	x y z	ABC	x y z
AFG	*x l m*	BC	y z

Therefore, A is causally connected with x

Example: Cases of colon cancer began to appear in the last five years in three neighboring villages. A scientific team, assigned to investigate the cause of this increase in colon cancer cases (C), surveyed all significant changes that took place in these villages over the last five

years and identified four circumstances as being possible causes for this phenomenon: The use of new fertilizers by farmers (F), the construction of a nuclear energy reactor near a river which supplies water to the villages (N), using pesticides for combating fruit bugs (P), and the introduction of fluorine to the water supply (W). The details of the combination of circumstances in each of the four villages are given below.

Table 3

Instance	Antecedent Circumstance	Phenomenon
1	F P W	C
2	N P W	C
3	F N P	C
4	F N P W	C

In addition, the scientific teams studied the circumstances introduced in the last five years in a fifth village where colon cancer has not occurred. Their finding is summarized below:

Table 4

Instance	Antecedent Circumstance	Phenomenon
t	F N _ W	_

Table 3 shows that P is present whenever C is present, while table 4 shows that P is absent when C is absent. We can therefore conclude that P (using pesticides) is the cause of the colon cancer cases in the four villages.

METHOD OF RESIDUES

This method has some affinity to the method of justification by elimination which classical Muslim scholars called *sabr wa taqsīm* (examination and division) in that the determination of the relevant circumstance is achieved by declaring the other circumstances irrelevant. The idea here is to eliminate possible causes of a phenomenon by showing that they are the causes of other phenomena associated with it. This method has the following structure:

ABC — x y z
B is the cause of y
C is the cause of z

Therefore, A is the cause of x

Note that we determined that A is the cause of x, because we already knew that B and C are the causes of the other two phenomena associated with x.

To illustrate this method let us take the following hypothetical example. Let us assume that in a riot, a policeman died after being hit by both a rock thrown by a rioter and a bullet mistakenly shot by another policeman. Assuming that the policemen must have died as a result of being hit by either the rock or the bullet, the city police may charge the rioter with the death of the policeman if they discover that the bullet hit the deceased in his protective gear, and hence cannot be the cause of his death. The above argument may be schematically presented as follows:

B, R — f, n
B is the cause of n

Thus, (R) is the cause of (f)

Where	B	—	bullet
	R	—	Rock
	f	—	fatal wound (stroke)
	n	—	non-fatal wound (stroke)

Because this method employs a mechanism similar to the one used by the method of *sabr wa taqsīm,* the pattern of reasoning employed is intrinsically deductive, not inductive.

METHOD OF CONCOMITANT VARIATION

In the four foregoing methods the causal relation was established between an instance and a phenomenon by ascertaining the simultaneous absence or presence of the two. This was done through an elimination process whereby the possibility of causal connection between the phenomenon under consideration and other accompanying circumstances was negated. But in order for these methods to yield useful results two conditions must be met. First, all circumstances accompanying the phenomenon must be identified. Failure to do that could result in deriving the wrong conclusions. This obviously is not easy to ensure, especially when dealing with complex phenomena. Secondly, in order for the elimination process to work, the right combination of circumstances must be given. As we saw in the first method, the distribution of circumstances surrounding the available instances must exist in such a pattern that only one circumstance is present at the time when the phenomenon is present.

The fifth method of induction helps in overcoming the limitation of the previous methods. The aim of examination here is not to identify the simultaneous absence or presence of the phenomena. Mill defined this method in the following terms:

> Whatever phenomenon varies in any manner whenever another phenomenon varies in some particular manner, is either a cause or an effect of that phenomenon, or is connected with it through some fact of causation.[132]

Using an upward arrow (↑) to indicate increase in the degree of the phenomenon, and a downward arrow (↓) to indicate decrease, the method can be structured in the following manner:

```
  ↑              ↑
A    B  C  —   x    y z
  ↓              ↓
A    B  C  —   x    y z

A    B  C  —   x    y z
```

Therefore, A and x are causally connected

Because the variation in a specific phenomenon, i.e. its increase and decrease, signifies a quantitative change, the method of concomitant variations is the only quantitative method of induction. For this reason the method has become, as we will see in the next chapter, the backbone of modern scientific methodology.

LOCKE

Bacon, we saw earlier, introduced inductive procedures, which Mill later elaborated into five distinct methods that he declared as the only legitimate methods for scientific reasoning. By insisting that the only type of knowledge that can be trusted is the one received through sensation, Bacon inaugurated the project of empiricism. The project was furthered by John Locke (1632-1704). Locke accepted Bacon's assertion that sense experience was the bedrock foundation of all human knowledge though he rejected Bacon's dismissal of deductive reasoning as untrustworthy. In his major work on epistemology, *An Essay Concerning Human Understanding* (1689), Locke contends that the human mind resembles, at the time of birth, a *tabula rasa* or blank slate, lacking any traces of ideas. The mind derives its ideas from experience, which constitute the deep foundation of knowledge.[133]

Locke distinguishes between two types of ideas, 'simple' and 'complex.' Simple ideas come mainly to the mind through sensation. Solidity, color, extension, motion are examples of simple ideas which the human mind acquires from sensory experience. In addition, simple ideas may be obtained from the mind's reflection on its own operations. Locke cites 'will' and 'thinking' as examples of simple ideas.[134] Once these ideas have been generated in the human mind, they can never be destroyed. They can only be combined and compared in order to generate complex ideas. The number of complex ideas that can be generated from simple ones is infinite. As Locke puts it:

> These simple ideas, the materials of all our knowledge, are suggested and furnished to the mind only by those two ways above mentioned, viz., sensation and reflection. When the understanding is once started with these simple ideas, it has the power to repeat, compare, and unite them, even to an almost infinite variety...But it is not in the power of—understanding—to invent or frame new simple ideas...nor... destroy those that are there.[135]

While Locke denies that the mind possesses any innate ideas and insists that all ideas are acquired through experience, he recognizes three functions of the human mind: (1) combining simple ideas together so as to form complex ideas, (2) relating one idea to another, and (3) abstracting general ideas from particular ones.[136] The difference between combining and relating is that while in the first the mind joins simple ideas to form compound ones (e.g., joining courage and humanness to produce the idea of hero), the independence of the simple ideas is maintained in the other (e.g., joining heat and fire).

Since the human mind has the ability to form complex ideas from simple ones, the question of the distinction between truth and falsehood arises. If human imagination is capable of joining a body of a lion to the head of a man to produce the idea of a "human lion," or of joining the wing of a bird to the body of a horse to produce the idea of a "flying horse," the question of how the real can be separated from the fictitious is far from being an idle one.

Locke initially defines truth as "the joining or separating of signs, as the things signified by them do agree or disagree with one another."[137] Yet he recognizes that this definition is very simplistic because it fails to see that the correspondence between the concept and the thing that the concept signifies is not direct or one-dimensional. That is to say, if the internal world (mind) and external world (objective reality) of man have direct interaction only at the level of simple ideas, the correspondence of complex ideas and real things can never be established directly (i.e., immediately), but is always indirect, mediated through complex schemes. This fact leads Locke to distinguish between two distinct but interrelated levels of truth: mental (real), and verbal. Mental truth can be achieved "when ideas are put together or separated in the mind as they or the things they stand for do agree or not."[138] Verbal truth, on the other hand, is obtained when "terms are joined according to the agreement or disagreement of the ideas they stand for, without regarding whether our ideas are such as really have, or are capable of having, an existence in nature."[139] Locke further realizes the intimacy of verbal and mental truth, for mental propositions can be analyzed and examined only when they are expressed in the form of verbal propositions. The separation of propositions into mental and verbal is not possible, for as soon as one begins to examine mental propositions, they immediately cease to be purely mental and become verbal.[140] Evidently, Locke was not fully aware of the implications of his discovery of the intimacy of ideas and words, or thought and language, for his theory of truth. The lack of immediate connection between complex ideas and reality undermines the correspondence theory of truth. The threefold schema of language, mind, and world (or words, ideas, and things) suggested by Locke points towards a theory of truth in which the principle of correspondence becomes secondary and the principle of coherence primary. That is to say, in the absence of immediate connection with complex thoughts and external things, truth has to be ascertained in two steps. First, the mental/verbal propositions about outside reality have to be systematically structured so as to eliminate internal contradictions and inconsistencies. When this consistency is attained, and thoughts constitute a coherent system, one arrives at a position in which one may examine the truth of his system

of thought by establishing correspondence between conclusions derived from it and outside reality.

Locke's failure to identify coherence as a criterion of truth leads him to conclude his discussion with a paradoxical statement. While he insists on correspondence as the criterion of truth, he denies that certainty can be achieved at the level of sensation and observation. "General and certain truth," he contends, "are only founded in the habitudes and relations of abstract ideas."[141] The paradox in Locke's discussion is reflected in the following statement.

> To conclude: general propositions, of what kind soever, are then only capable of certainty, when the terms used in them stand for such ideas whose agreement or disagreement, as there expressed, is capable to be discovered by us. And we are then certain of their truth or falsehood, when we perceive the ideas the terms stand for to agree or not agree according as they are affirmed or denied one of another. Whence we may take notice that general certainty is never to be found but in our ideas. Whenever we go to seek it elsewhere, in experiment or observations without us, our knowledge goes not beyond particulars.[142]

Contrary to Bacon's assertion that the human mind cannot be trusted, Locke contends that rationality rather than sense perception is the bedrock of certainty. However, like Bacon he considered the human mind to be a mirror reflecting the outside world. The human mind, he maintained, has no innate ideas or principles, but only the mechanisms of combining, relating, and joining simple ideas. He therefore falls in neither the empiricist nor in the rationalist traditions of Western scholarship. However, he contributed to the advancement of both by undermining the authority of metaphysics.

REVELATION UNDERMINED

Locke is among very few Western thinkers who confronted the question of revelation directly. Toward the end of his book Locke examines

the significance of revelation as a source of knowledge. While considering divine revelation to be, in principle, a source of certain knowledge, he defines its authority in such a manner that it is assigned a very marginal and subordinate role among the sources of knowledge. To begin with Locke argues that knowledge acquired by human reasoning is more certain than knowledge received through revelation. For while one may doubt the preservation of the original revelation through the act of narration, or question the lack of means for validating or substantiating its content, one can always be certain about what his faculty of understanding considers to be true.[143] He therefore concludes that with regard to propositions whose certainty is ascertained by the virtue of having self-evident quality, and hence admitted through immediate intuition or by the evidence of deductive reasoning through demonstration, revelation is superfluous and not needed.[144]

Locke gives revelation the upper hand over reason in two instances. First, in questions belonging to the realm of faith. This realm, being inaccessible to human reasoning, is governed by revelation. Secondly, revelation should supersede reason in the realm of probable knowledge which does not rise to the level of certainty. Yet even this conditional recognition of the authority of revelation is not maintained for long, for as Locke proceeds in his discussion of the status of revelation, he manages to undermine whatever is left of its authority; and he does that not by compelling evidence, but through a sheer act of will. As he put it:

> There can be no evidence, that any traditional revelation is of divine original, in the words we receive it, and in the sense we understand it, so clear and so certain, as that of the principles of reason: and therefore nothing that is contrary to, and inconsistent with, the clear and self-evident dictates of reason, has a right to be urged or assented to as a matter of faith, wherein reason hath nothing to do.[145]

But the concessions that Locke gives to revelation in the area of knowledge where reason either has no access or produces uncertain knowledge are more apparent than real. This is because he perceives revelation to be contradistinguished to reason, and hence reducible to

ungrounded faith. That is to say, by not considering revelation as a source of knowledge capable of endowing reason with information as reality does, revelation is immediately established as a rival body of knowledge on par with the body of knowledge credited as truth by reason. Indeed Locke even rules out the possibility of having self-evident truth embodied in revelation which can be accepted immediately through intuition, thereby contradistinguishing revelation with intuitive knowledge. Locke writes:

> For since no evidence of our faculties, by which we receive such revelations, can exceed, if equal, the certainty of our intuitive knowledge, we can never receive for a truth anything that is directly contrary to our clear and distinct knowledge.[146]

Locke's contradistinction of reason and revelation becomes especially problematic when we realize that by reason Locke does not simply refer to the formal principles of logic, but also understands a body of knowledge acquired through sensation and reflection. Hence, reason signifies, in Locke's terminology, common-sense knowledge accepted by society. This understanding is quite apparent in the following passage:[147]

> For, to this crying up of faith, in opposition to reason, we may, I think, in good measure ascribe those absurdities that fill almost all the religions which possess and divide mankind. For men having been principled with an opinion, that they must not consult reason in the things of religion, however apparently contradictory to common sense, and the very principles of their knowledge; have let loose their fancies and natural superstition.[148]

Granted that religiosity has the potential, in the absence of sound methods of derivation, to revert to superstition, one cannot use common sense as the criterion of truth. Locke's attitude toward revelation can only lead to undermining its authority.

A proper approach toward revelation is to identify and examine the authenticity of its claims. Once this process is completed, and revelation is accepted, it has to be regarded as a source of knowledge. Hence, a set of logical methodical rules should be established for its interpretation and for deriving ideas and precepts from it.

HUME AND KANT

The project of pure empiricism was taken to its logical conclusion in the writings of David Hume (1711-1776). The conclusion was, however, a total embarrassment to the human intellect, for Hume discovered that human reasoning arose completely out of the habitual regularity of past experiences of man, a conclusion not unlike that arrived at earlier by al-Ghazālī.

In keeping with Locke's assertion that the human mind is prior to experience a "blank paper," Hume contends that "all our ideas or more feeble perceptions are copies of our impressions or more lively ones."[149] By impressions Hume understands sentiments (e.g. love, hate, desire), which reflect the internal state of the individual, and sense-data, which convey the external state of the individual.[150] Hume concludes, therefore, that the criterion of truth is to find the impressions which lie at the foundation of our ideas. Ideas that are not rooted in our experience must be rejected for lacking any scientific foundation. As he put it:

> When we entertain, therefore, any suspicion, that a philosophical term is employed without any meaning or idea (as is but too frequent), we need but enquire, from what impression is that supposed idea derived? And if it be impossible to assign any, this will serve to confirm our suspicion. By bringing ideas into so clear a light, we may reasonably hope to remove all dispute, which may arise, concerning their nature and reality.[151]

Unlike Locke, however, Hume denied that the principles of reasoning are innate to the human mind. He identified three principles responsible for ordering ideas: "resemblance, contiguity in time or place,

and cause or effect."[152] The three do not enjoy equal importance, for with regard to the ascertainment of fact, human reasoning relies completely on the principle of causality.[153] Hume insisted that the principle of causality is not innate to the mind, but acquired from experience. It arises from the experience when it is observed that certain objects "are constantly conjoined with each other."[154] What was puzzling to Hume was the fact that the conjoining of two objects and attributing causal relation to them is completely arbitrary since it is always based on the correlation between the cause and effect, and never on a necessary connection. The connection between cause and effect cannot be necessary; first, because the human mind is capable of accepting the opposite of a specific causal relation, and second, because assigning causality to two objects is not in itself the result of "a chain of reasoning." That is, causal knowledge, Hume proclaims, is neither intuitive nor inferred through syllogistic reasoning since a middle term that may conjoin the two objects is lacking.[155] What is puzzling, however, is that the human mind seems to be able to establish causality between objects from very few instances. Hume uses the example of the causal relationship one establishes between eating bread and the nourishment of the body. One may find that he receives nourishment upon eating a piece of bread, and he concludes that he will get similar nourishment from eating similar food. The question confronting Hume is how the proposition "every piece of bread nourishes" can be derived from the proposition "the piece of bread I just ate nourished me." Hume writes:

> These two propositions are far from being the same: I have found that such an object has always been attended with such an effect, and I foresee, that other objects, which are, in appearance, similar, will be attended with similar effects. I shall allow, if you please, that the one proposition may justly be inferred from the other: I know, in fact, that it always is inferred. But if you insist that the inference is made by a chain of reasoning, I desire you to produce that reasoning. The connexion between these propositions is not intuitive. There is required a medium, which may enable the mind to draw such an inference, if indeed it be drawn by reasoning

> and argument. What that medium is, I must confess, passes my comprehension; and it is incumbent on those to produce it, who assert, that it really exists...[156]

The combination of the mind's tendency to generalize from a few instances on the one hand, and what Hume saw as the lack of necessity in causal connections on the other, raised for Hume a puzzling question which he could not answer. Yet this formulation of the question was quite dangerous and had far-reaching implications for human reasoning. For as with the case of a1-Ghazālī before him, Hume's denial of causality amounted to the denial of human reasoning and the reduction of causal explanation to the "customary conjunction" between objects. "What then is the conclusion of the whole matter?" Hume poses the question, and then answers it by saying: "A simple one; though, it must be confessed, pretty remote from the common theories of philosophy. All belief of matter of fact or real existence is derived merely from some object, present to the memory or senses, and a customary conjunction between that and some other object."[157]

The failure of pure empiricism to sustain intellectual endeavors prompted Kant to seek a solution in metaphysics. Kant set out, in the *Critique of Pure Reason,* to examine "whether such a thing as metaphysics be even possible at all?[158] That is, the main question which prompted Kant to write his critique was to find out whether it is possible for the mind to acquire knowledge apart from experience. Kant terms the knowledge which precedes experience *a priori* and specifies "necessity and strict universality" as the criteria of its identification.[159] He observes that all judgments (i.e., propositions), in which two heterogeneous elements (the subject and the predicate) are united, may be divided into two types: analytic judgments, in which the predicate is already manifested in the subject, and synthetic judgments, in which the predicate lies outside the subject. Analytic judgments are therefore tautological since the predicate adds nothing new which is not already included in the subject, while synthetic judgments add to our knowledge because the information brought to bear on the subject cannot be deduced by analyzing the latter. The two types of judgments are, according to Kant, subject to different principles. Analytical judgment is

governed by the principle of contradiction, which is completely sufficient for all analytical knowledge.[160] Apart from analytical statements, the principle of contradiction can, however, claim no authority. Kant further observes that synthetic judgments are of two types: *a posteriori,* obtained through experience and therefore part of the empirical world, and *a priori,* preceding all experience and part of the metaphysical world.

Having made this distinction, Kant can now reduce the initial question about the possibility of metaphysical knowledge into a more manageable question: How are *a priori* synthetic judgments possible?[161] Kant obviously has a practical interest in examining the possibility of *a priori* synthetic judgment. Since myth and superstition could be ascertained only through this kind of judgment, establishing criteria which would exclude these two types of judgment would definitely contribute to human progress. Kant recognizes that judgments are the only mental entities that connect mind with outer reality and link the realm of thinking with the realm of objective being. Judgments establish an absolute identity between the subject, which is "particular and in the form of being," and the predicate, which is "universal and in the form of thought."[162]

Kant distinguishes among three levels of apprehension: intuition, understanding, and reason. Intuition is the faculty of sense-perception, whereby the representations effected by the sensible objects are apprehended. The received representations are then organized through the concepts of the understanding. The faculty of understanding furnishes the rules by which sense-data are subsumed under the various concepts, and hence imputes unity and order to the world of appearances. Finally, reason provides the principles which permit the unity of the concepts.[163] Kant maintains that this series of mental activities in which intuition is connected with pure reason through the understanding are interrelated, and that the validity of each can be ascertained only insofar as the connection between the three levels of apprehension is maintained. That is to say, the validity of the mental processes that take place at the level of reason could be ascertained only as long as reason is employed for the purpose of demarcating the principles of logic, which functions are to regulate *a posteriori* syntheses. Kant

justifies the limitation he imposes on the use of pure reason by arguing that since sense-data are the only access the mind has to the objective world, the correspondence between thoughts and objects has to be substantiated by intuition.

Kant terms the system of principles which determines the proper use of understanding "transcendental analytic," and concludes that synthetically knowledge is possible only through the "faculty" of understanding:

> Since, properly, this transcendental analytic should be used only as a canon for passing judgment upon the empirical employment of the understanding, it is misapplied if appealed to as an organon of its general and unlimited application, and if consequently we venture, with the pure understanding alone, to judge synthetically, to affirm, and to decide regarding objects in general.[164]

Yet Kant does not dismiss *a priori* knowledge as a whole, for after all, the rules of understanding, he maintains, are *a priori*.[165] That is, the concepts which unite and order appearances are not themselves acquired through experience, as the empiricist would argue, but are innate to the human mind and constitute the internal structure of understanding. But if we ask Kant how it is possible for him to ascertain the truth of the concepts of the understanding and the rules which guide their operation, even though these rules and concepts are not part of the sensible world and, hence, unrecognized by the intuition, he would respond by arguing that such knowledge is possible through pure reason. For "reason," Kant proclaims, "is the faculty which supplies the principles of *a priori* knowledge." Pure reason is, therefore, that "which claims the principles whereby we know anything absolutely *a priori*."[166] But if we now ask how it is possible that pure reason is capable of ascertaining the rules of understanding *a priori* and at the same time fails to ascertain the truth of other transcendental concepts, then here we should expect no easy answer for we find that any response derived from Kant's critical philosophy will inevitably run into difficulties and inconsistencies.

Kant points out that the truth of transcendental ideas (or the reality of ostensible objects) cannot be affirmed in the absence of any formal conditions which permit us to subsume transcendental objects under concepts.[167] He writes:

> The pure categories, apart from formal conditions of sensibility, have only transcendental meaning; nevertheless they may not be employed transcendentally, such an employment being in itself impossible, inasmuch as all the conditions of any employment in judgments are lacking to them, namely, the formal conditions of the subsumption of any ostensible object under these concepts.[168]

As to the truth of the formal conditions of the subsumption of sensible objects, Kant invokes the principle of necessity whereby the rules regulating the subsumption of objects (identity, difference, and non-contradiction) acquire their universality and objective validity by being borne concomitantly in the minds of rational beings in general, and substantiated through general consensus:

> ...the business of the senses is to intuit, that of the understanding is to think, But thinking is uniting representations in one consciousness. This union originates either merely relative to the subject and is accidental and subjective, or takes place absolutely and is necessary or objective. The union of representations in the consciousness is judgment. Thinking, therefore, is the same as judging or referring representations to judgments in general. Hence judgments are either merely subjective when representations are referred to a consciousness in one subject only and united in it, or objective, when they are united in consciousness in general, that is, necessarily.[169]

Any concept whose object cannot be "intuited" through the senses is therefore an empty concept, "without meaning." Furthermore, Kant insists that the rules of understanding are the only "source of truth."[170]

For since the formal definition of truth, Kant tells us, is "the agreement of knowledge and its object," and since such an agreement can be ascertained only between concepts and sensible objects, the certainty of transcendental objects can never be affirmed. It follows that we can in vain talk about truth beyond the empirical world.

Kant's reduction of truth to empirical truth, and intuition and concept to sensible intuition and concept is arbitrary and unwarranted by the quality of evidence he uses to argue his case. Kant correctly identifies intuition and concept as the basic elements of all our knowledge and rightly divides each into pure and empirical.[171] By intuition Kant understands knowledge which the mind recognizes directly as true.[172] By "pure" he refers to "all representations… (in the transcendental sense) in which there is nothing that belongs to sensation."[173] Yet rather than defining pure intuition as the essential representation which the mind accepts immediately as a true knowledge, he posits the idea of 'extension' and 'figure' as examples of pure intuition. This perception of the intuition, Kant tells us, can be obtained by the process of eliminating "what belongs to sensation." As he explains:

> This pure form of sensibility may also itself be called pure intuition. Thus if I take away from the representation of a body that which the understanding thinks in regard to it, substance, force, divisibility, etc., and likewise what belongs to sensation, impenetrability, hardness, colour, etc., something still remains over from this empirical intuition, namely, extension and figure. This belongs to pure intuition, which, even without any actual object of the senses or of sensation, exists in the mind *a priori* as mere form of sensibility.[174]

Kant's sparing of extension and figure as mental residues, remaining after the elements of sensation and understanding are excluded, is arbitrary. For one thing, 'extension' and 'figure,' which Kant classifies under the category of intuitive knowledge, are no different from what Kant classifies as 'concept'. It follows that Kant's distinction between pure intuition and conception is a matter of expedience. For another thing, Kant himself refuses to assign the same category of pure intu-

ition to what remains after all that belongs to sensation and conception with regard to the whole being is excluded. Kant refuses to identify divinity as being the ultimate reality even when he concedes the necessity of a higher order behind the world of appearance. He writes:

> If, in connection with the transcendental theology [which for Kant signifies illusion], we ask, first, whether there is anything distinct from the world, which contains the ground of the order of the world and of its connection in accordance with universal laws, the answer is that there undoubtedly is. For the world is a sum of appearances... If, second, the question be whether this being is substance, of the greatest reality, necessary, etc., we reply that this question is entirely without meaning. For all categories through which we can attempt to form a concept of such an object allow only of empirical employment.[175]

One can only be puzzled as to w mentalhy Kant does not proceed in his argument further to identify the residue of an omniscient and omnipotent being as elements of pure intuition after the concept of universal law is excluded.

Kant's summary treatment of pure intuition ultimately leads him to reduce truth to empirical truth, and hence perpetuate empiricism by providing it with a rational basis. He concludes that human beings are capable only of receiving sensible intuition. "Our nature is so constituted," he proclaims, "that our intuition can never be other than sensible."[176] Kant's conclusion was influenced, I contend, by the specificities of Western cultural and historical experience. Kant's insistence that intuition, and experience in general, is exclusively empirical is prejudiced by his desire to exclude religion from scientific endeavors and confine it to dogmatic or speculative argumentation. But on closer examination, one can see that intuition is not only the point of contact with the empirical, but also with the ultimate reality. That is to say, empirical intuition permits us to apprehend empirical reality, while pure intuition allows us to apprehend the absolute one. The intrinsic difference between the two is that while the former is the first link in the

chain of reasoning, the latter is the final link in the same chain. Empirical intuition consists of a multiplicity of sensible representations from which the mind through successive abstraction derives the concepts of understanding. Pure intuition, on the other hand, consists of a singular representation, which is the unity of all concepts. Between these two acts of intuition lies the process we call reasoning, that is, the constant movement from the particular to the universal through the intermediacy of the concept.

This new understanding of intuition opens the door for the incorporation of revelation as a source of knowledge. For the possibility of pure intuition, i.e., immediate knowledge of suprasensible (or transcendental) facts, signifies a different kind of experience that human beings are capable of by way of transcendental or spiritual experience. This experience has been completely ruled out by Kant. Transcendental experience (as opposed to empirical) allows the human intellect to apprehend transcendental truths, most notably the notion of the divine source of existence, the notion of human accountability, and the notion of communication (revelation) between the divine and the human. The knowledge of these truths is immediate, acquired through pure intuition. As such, pure and empirical intuitions are subject to the same test, namely that both can be validated by being simultaneously borne in the consciousness of a multiplicity of individuals.

While one must agree with Kant that knowledge of transcendental existents cannot be predicated on individual claims, or claims stemming from an experience which is not open to the multitude, this knowledge acquires an increasing degree of certainty as it is experienced by an increasing number of people. For one has to admit that the quality of evidence in this case is of the same caliber as the knowledge acquired through empirical intuition.

Accordingly, the question of whether or not divine revelation is a trustworthy source of knowledge can only be answered by intellectually competent persons who have had a profound and meaningful encounter with claims of revelation in both their totality and specificity. It is from this perspective that one can begin to understand why the revealed secures the respect of the intelligentsia in one religious tradition while it becomes a source of embarrassment in another.

6 CHAPTER

NATURALISTIC METHODS AND THE PECULIARITY OF SOCIAL STUDIES

We saw in the foregoing chapter that the empiricist tradition, established by Bacon, culminated in the negation of the principle of causality, and hence undermined the very notion of reason. In a word, Hume's arguments brought about an intellectual crisis. The crisis was resolved by Kant who pointed to the innate, or *a priori*, principles of reason, including the principle of causality. To do that, Kant emphasized the need to employ metaphysical (or transcendental) concepts and showed that the intellectual crisis created by Hume was the result of the latter's insistence on negating the entire field of metaphysical argument. Yet Kant's endeavors resulted in the reduction of the concept of truth to empirical truth. Science and scientific methods, Kant insisted, have no access to reality which lies beyond sensible experience. It was then only a matter of time before naturalistic methods (i.e., methods designed to study natural phenomena) became the only scientific method. Naturalistic methods emphasize experiments as the ultimate test for establishing the truth of scientific theories. Perhaps the two thinkers who have been the most influential in shaping the structure of naturalistic methodology are Emile Durkheim (1858-1917) and Karl Popper (1902-1994). It is for this reason that we turn now to examine their ideas on scientific methods beginning with those of Durkheim.

NATURALISTIC METHODS AND THE STUDY OF SOCIAL PHENOMENA

The notion that truth is reducible to empirical truth has been extended to the study of social and human phenomena. Emile Durkheim ex-

erted tremendous influence in shaping contemporary Western social research. In *The Rules of Sociological Method*, Durkheim identified three principal rules for the study of social phenomena.

First, the sociologist must systematically discard, he contended, "all preconception."[177] By preconceptions Durkheim understood notions which do not stem from "scientific" concerns, (i.e., are not reducible to empirical existence), but rather from religious, political, and moral ones. This rule, he argued, is only a restatement of Descartes' "method of doubt" and Bacon's "theory of ideals."[178]

Second, only those phenomena that can be defined by visible characteristics can be the subject matter of scientific research. Durkheim defended this rule against the charge that it would lead to focusing attention on the superficial properties of social phenomena by arguing that studying the visible characteristics of social phenomena was only the initial step in a chain of steps aimed at realizing the "essence" of social phenomena.[179]

Third, in order to ensure objectivity, the sociologist must exclude all data that result from the manifestation of social phenomena in individual consciousness. Durkheim uses the example of the physicist who substitutes for the vague impressions produced by temperature or electricity the visual representation afforded by the rise and fall of the thermometer and the voltmeter.[180]

The above three rules are corollaries of a more fundamental rule. "The first and most basic rule," Durkheim wrote, "is to consider social facts as things."[181]

By that he meant that beliefs, tendencies, and practices of social groups should be studied by the sociologist not in their forms in consciousness, but only in their institutional forms. As he put it:

> A social fact is identifiable through the power of external coercion which it exerts or is capable of exerting upon individuals. The presence of this power is in turn recognizable because of the existence of some predetermined sanction, or through the resistance that the fact opposes to any individual action that may threaten it.[182]

Durkheim justifies the equation of social phenomena with observable "facts" or "things" by arguing that the thing[183] is "all that is given, all that is offered, or rather forces itself upon our observation."[184]

Durkheim's three rules of observation aim at reducing social phenomena to their empirical aspects, and purport, hence, to deny the existence of a metaphysical (religious, moral) order governing the pattern of their manifestation. Yet Durkheim establishes his rules not by an act of knowledge, but by an arbitrary act of will. For one thing, the proposition that one can "systematically discard all preconceptions" is untenable. Not only does all scientific reasoning have to begin with some notion or principle which is posited as a given, an axiom or a postulate, but also the very notion that one can "discard all preconceptions" is in itself a presupposition, and hence a self-contradictory notion. The notion of "discarding all presuppositions" cannot be accepted for a more important reason: by excluding consciousness from scientific research Durkheim's rules contribute to the idealization of the actual. That is, these rules deny the transcendental nature of the norms and values which order society, and hence derive the normative from the actual. As a result, the actual practices and institutions are idealized and perpetuated.

Indeed, as soon as Durkheim concludes his elaboration of the "rules of observation," he turns in the next chapter, entitled "Rules for the Distinction of the Normal from the Pathological," to derive the ideal from the actual, or social values from social facts. Arguing that the "rules of observation" do not allow us to distinguish normal from pathological phenomena, he poses the following question: "Does science have the means available to make this distinction?" Durkheim rejects the notion that the ‘ought’ cannot be derived from the ‘is,’ i.e., values may not be arrived at from examining facts, arguing that if science can tell us what are the best means we should adopt in order to realize specific goals, it should be able to determine what should be our best goals. This is because, he maintains, the means we adopt for achieving the highest ends are themselves intermediary ends. He therefore concludes that if reason can determine intermediary ends, it should have the power to determine the highest ends as well. But Durkheim's conclusion has evidently been predicated on wrong premises. For the

proposition that if reason can determine intermediary (or subordinary as he prefers to put it) ends, then it should also be able to determine the ultimate (or highest) ends, is erroneous. This proposition fails to see that the ability of reason to determine intermediary ends is possible only as a result of the presence of ultimate ends themselves. However, in the absence of ultimate ends, the determination of intermediary ends can only be based either on the arbitrary power of the will, or on actual social practices.

Indeed, Durkheim uses a combination of the two to identify the criterion of normality. Having concluded that reason is capable of distinguishing the normal from the pathological, he moves on to liken the state of normality of society to the state of health of the human body. This state of health or normality, he proclaims, is achieved through the process of adaptation to the surrounding environment. As he puts it:

> Consequently the normality of a phenomenon can be explained only through its being bound up with the conditions of existence in the species under consideration, either as the mechanically essential effect of these conditions or as a means allowing the organism to adapt to these conditions.[185]

Since adaptation as a criterion of normality requires further specification before it can be used for the purpose of scientific research, Durkheim elaborates this principal rule of normality by identifying the following three rules:

(1) A social fact is normal for a given social type, viewed at a given phase of its development, when it occurs in the average society of that species, considered at the corresponding phase of its evolution.

(2) The result of the preceding method can be verified by demonstrating that the general character of the phenomenon is related to the general conditions of collective life in the social type under consideration.

(3) This verification is necessary when this fact relates to a social species which has not yet gone through its complete evolution.[186]

The three rules of normality cited above have, in effect, three far-reaching implications.

First, they assume that social evolution is unilinear starting from a primitive social organization (i.e., tribalism) and concluding in the "complete" society (i.e., Western civilization). Societies which fall between the two extremes are those which have progressed beyond the primitive type, but have not been able to develop at the same pace as Western society. Since the difference in development pace is not explained but presumed, the above rules are apt to produce ethnocentric explanations.

Second, the actual practices of Western society (which, according to the above schema, stands at the peak of human evolution) become the standard of normality. Right and wrong are no longer determined by universal values which stand over and above social practices, but are themselves embodied in the actions and institutions of Western man.

Third, Western practices are posited as the criteria of normality to other societies, or, as Durkheim puts it, to any "social species which has not yet gone through its complete evolution."[187] The latter constitutes the bulk of humanity.

Clearly, Durkheim is not the first Western scholar to postulate the unilinearity of historical evolution and the normativeness of Western civilization; he is one in a long chain of thinkers which includes, among many others, the French Condorcet, the British Spencer, and the German Hegel. What distinguishes Durkheim from other Western thinkers is that he was the first to incorporate such Eurocentric tendencies into the rules of scientific methodology. In fact Durkheim rebuked the moralist thinker for failing to grasp "the simple fact" that moral values can be arrived at by "observing the rules that function before our very eyes and perceiving them systematically."[188]

In a surprising move Durkheim discovers, by "observing the rules" of social interaction, that crime is normal "because it is completely impossible for any society entirely free of it to exist."[189]

Durkheim's argument may be summarized as follows. In order for the collective feeling, which the penal law of a specific society purports to protect, to penetrate individual consciousness, they need to acquire intensity in the external social environment. This intensity is furnished by the very acts which challenge them, i.e., criminal acts.[190]

In fact, Durkheim's argument, rather than supporting his claim that the rules of normality can be derived by observing social interaction, demonstrates why the ‘ought’ cannot be derived from the ‘is.’ For by linking crime to punishment, Durkheim confuses two completely different types of nonconformity, the pathological and the heroic. The two cannot be distinguished without making reference to moral and psychological, and hence meta-social elements, namely, individual gratification in the case of crime and moral/spiritual commitment to universal transcendental values in the case of heroism.

Having established the rules of observation and the rules of normality, Durkheim turns to determine the nature of sociological explanation and to specify the methods needed to explain social phenomena. Durkheim contends that sociological explanation boils down to identifying the causes of specific phenomena, or alternatively, determining its effects.[191]

Reviewing the five methods of induction identified by Mill, he chooses the method of concomitant variations as the only appropriate method for the study of social phenomena. The other methods of induction, or comparative methods as he prefers to call them, are of little or no use to sociologists. The methods of agreement and difference are of little help in studying the complex phenomena we usually encounter in social studies because we "can never be sure that we have not omitted to consider some antecedent which agrees with or differs from the consequent effect, at the same time and in the same manner as the sole known antecedent."[192] For the same reason the method of residues “cannot be put to practical use by social scientists because, as a result of the complexity of social phenomena, it is not save one."[193]

The comparative method, reduced to the single method of concomitant variations, is especially powerful in social studies since social phenomena are not subject to direct experimentation. However, "laws

established through this procedure do not always present themselves at the outset in the form of causal relationships."[194]

He rightly points out that further analysis and interpretation are required for the determination of causality since one cannot rule out the concomitant variation of two phenomena occurring as a result, because of a third phenomenon interposed between them, but escaping observation.[195]

Further, Durkheim correctly points out the need for comparing phenomena not only with regard to their present characteristics, but throughout the course of their evolution. The need for such extensive comparison can be established when one realizes that social phenomena do not arise solely from the actions of people who are present at the moment, but are influenced by past actions and events as well. He concludes, therefore, that "comparative sociology is not a special branch of sociology, it is sociology itself, in so far as it ceases to be purely descriptive and aspires to account for facts."[196]

POPPER'S CONJECTURE AND FALSIFICATION

Naturalistic methods which equate social phenomena with natural objects and call upon researchers to treat social interaction in the same fashion as the physicist deals with natural behavior acquired more sophistication in the writings of Karl Popper. Although Popper was a philosopher of natural science, his methodological approach was also embraced by Western social science. The naturalistic method elaborated by Popper is rooted in a broader philosophical conception of the nature and scope of human knowledge, which he calls "critical rationalism."[197]

> Popper uses the title "critical rationalism" to distinguish the philosophical foundation of his methodology from what he refers to as "uncritical or comprehensive rationalism."[198]

Comprehensive rationalism insists that all assertions be based either on arguments or on observation. This position, he notes, is logically untenable, since all arguments have to begin from some assump-

tions. According to Popper, the inconsistency of comprehensive (or uncritical) rationalism becomes apparent when one realizes that "the demand raised by many philosophers that we should start with no assumption whatever and never assume anything without 'sufficient reason,' is in itself an assumption."[199]

Critical rationalism believes, on the other hand, that all our knowledge is tentative, based on some irrationally-based statements, i.e., on statements which have been accepted by an act of faith. The difference between uncritical and critical rationalism is, however, that while the former refuses to recognize the irrational nature of its foundation, and hence becomes trapped in a closed system of thought which lacks the means for self-correction, the latter is fully aware of the tentativeness of its knowledge and works continuously for improving and rectifying its knowledge base. In short, Popper's critical rationalism sets out from the assumption or belief that all scientific knowledge, all laws and theories, "are conjectures, or tentative hypotheses."[200]

This new formulation of the nature of science and scientific knowledge allows Popper to provide a different solution to the problem of induction than the one provided earlier by Kant. Kant himself would be, according to Popper's definition, one of the proponents of comprehensive rationalism. Popper contends that the logical problem of induction has traditionally emanated from the problem generated within Hume's empiricist philosophy, namely the contradiction between "(1) Hume's discovery...that it is impossible to justify a law by observation or experiment," and "(2) the fact that science proposes and uses law everywhere and all the time."[201]

To these two principles Popper adds a third one: "(3) the principle of empiricism which asserts that in science only observation and experiment may decide upon the acceptance or rejection of scientific statements, including laws and theories."[202]

As we saw earlier, Kant resolved the contradiction between principles (1) and (2) by introducing a third principle of metaphysical or transcendental unity of appearances in the human consciousness. Popper on the other hand rejects any attempt aiming at overcoming the induction problematique by appealing to a comprehensive (and hence uncritical) rationalistic response arguing that the problematique itself

completely disappears when viewed from a critical rationalistic perspective. That is to say, Popper maintains that by using induction to infer from empirical evidence the falsity of a law or theory, the apparent contradiction between principles (1) and (3) dissipates at once.[203] As he puts it:

> The answer to this problem [of induction] is as implied by Hume: We certainly are not justified in reasoning from an instance to the truth of the corresponding law. But to this negative result a second result, equally negative, may be added: we are justified in reasoning from a counter instance to the falsity of the corresponding universal law...[204]

Popper evidently fails to realize that his approach requires an already developed rational system that can generate hypotheses or guesses which can be described as meaningful. That is, laws, hypotheses, guesses, and theories are meaningful only when they are parts of a coherent and internally consistent system of thought. Arbitrary and utterly fragmented hypotheses cannot enrich human knowledge. Put differently, "critical rationalism" taught by Popper presupposes a comprehensive rationalism. Popper, influenced by his anti-historicist prejudices, failed to realize that his approach makes sense to him, and to those who share with him the same cultural consciousness, because it takes for granted, and operates from within, the system of thought developed by the comprehensive (and uncritical) philosophy of the enlightenment. Not only does Popper fail to see the broader intellectual tradition which constitutes the forgotten foundation of contemporary Western knowledge, but he fails as well to recognize the historically-located sources of knowledge. Perhaps Popper's anti-historical attitude which leads him to deny foundation, sources, cohesiveness, and internal consistency of knowledge is nowhere more apparent than in the following passage:

> So my answer to the questions "How do you know? What is the source or the basis of your assertion? What observations have led you to it?" would be: "I do not know: my assertion

> was merely a guess. Never mind the sources, and I may not be aware of half of them; and origins or pedigrees have in any case little bearing upon truth. But if you are interested in the problem which I tried to solve by my tentative assertion, you may help me by criticizing it as severely as you can; and if you can design some experimental test which you *think might refute my* assertion, I shall gladly, and to the best of my power, help you to refute it."[205]

And so while Popper recognizes that a system of thought which is rational through and through is untenable, and that rationality has ultimately to ground itself in certain self-evident notions and statements, his solution to the failure of Western scholarship to establish a system of thought which is completely autonomous of authoritative sources of knowledge is abrupt. The solution Popper chooses is to do away with the idea of ground of truth, and entirely reject the idea of divine sources of knowledge, insisting that all knowledge which humans possess is human in origin.[206]

The method for establishing the truth of certain claims advanced by Popper is closely connected with the philosophical foundation already discussed above. The method consists of the following steps:[207]

First, a number of conclusions are deductively derived from a general statement put in the form of "an anticipation, a hypothesis, a theoretical system, or what you will."[208]

Second, the set of conclusions derived from the theory is comparatively examined using a group of criteria, which may include: (a) the internal consistency of the conclusions, (b) whether the theory adds new "empirical knowledge," and not simply a tautological statement, (c) whether the theory, in comparison to others, contributes to the advancement of our knowledge, and (d) whether the conclusions derived from the theory are susceptible to empirical testing. Popper seems to prescribe this step for the purpose of the preliminary examination of the theory. However, the critical testing of the theory is done through the next two steps.

Third, a number of particular (or singular) statements expressed in terms of "predictions" are deduced from the theory. These predic-

tions should be expressed in such manner that they can be easily tested in the empirical world.

Fourth, if the empirical testing of the particular statements produces acceptable results (i.e., the predictions have been consistent with empirical reality) the theory is for the time being verified. But if the testing of the particular statements produces results inconsistent with the empirical world, the conclusions are then falsified, and their falsification leads in turn to the falsification of the theory from which they were logically deduced.

Fifth, as long as the theory continues to withstand subsequent testing, and continues to be consistent by subsequent scientific discoveries, "we may say that it has proved its mettle or that it is 'corroborated' by past experience."[209]

According to the foregoing scheme, the scientific verification of theory requires the following three elements:

1. *Hypothesis:* This is a universal statement expressing a law or a general rule. A hypothesis is usually put in the form of a conditional statement, (if p then q).
2. *Initial Conditions:* These are what Popper calls singular (particular) statements. Initial conditions refers to certain circumstances which must exist in order for the law or hypothesis to take place (i.e., for its effects to take place). These conditions must be present at the beginning of the test, hence the term initial.
3. *Prediction:* Prediction is also a singular statement. The prediction statement describes a possible event and is deduced from both the hypothesis and initial conditions.

With these basic elements, the testing of a theory or a theoretical hypothesis is possible. We are now in a position to specify the basic structure of the falsification approach (or the refuting argument) developed by Popper. Using H, IC, and P to respectively denote hypothesis, initial conditions, and predictions, the refutation method may be schematically written as follows:

(1) If (H and IC) then P	premise 1
(2) Not P	premise 2
(3) Not (H and IC)	denying the consequent
(4) Not H or not IC	distribution
(5) IC	additional premise
(6) Not H	disjunction

The above argument may be collapsed into two premises and a conclusion:

(1) If (H and IC) then P	premise 1
(1) Not P and IC	premise 2
(1) Thus not H	conclusion

Notice that we cannot conclude that our hypothesis is true simply by affirming the truth of our prediction, for in this case our argument, affirming the consequent, would be logically invalid. The truth of the prediction can *only* tell us that our theory has not been so far falsified, that is, it has been corroborated.

The above schema shows the structure of the argument which can be used to falsify a theory. This structure tells us that while countless number of confirming cases can only corroborate, but can never establish the truth of a theory, one disconfirming case can falsify the theory. However, as long as the theory has not been falsified it continues to provide us with a causal explanation of a specific phenomenon.

The patterns of scientific explanation can be expressed schematically as follows:

$C_1, C_2, ...Cn$ (particular explanatory conditions)

$H_1, h_2, ...Ln$ (general laws)

E (Description of the empirical phenomenon to be explained [210]} explanandum

Consider the following example. Let us assume that the Dean of the Law Faculty at the International University (IU) made the following statement:

> All IU law students who have completed 90 credit hours and maintain 3.0 GPA can pass the state bar examination.

Now this statement has the form of a universal rule which permits us to explain or predict particular cases which fall under the universal category of "IU law students." And so if we came to know of a particular student (Abdullah) as an IU law student, we may, based on the universal rule, conclude that he will pass the bar examination. The particular statement: "Abdullah, who is an IU student with 90 credit hours and 3.0 GPA, will pass the bar exam" is a prediction whose realization corroborates the universal statement. But while Abdullah's passage of the bar exam does not establish the truth of the general statement, his failure will definitely falsify it. However, to falsify the universal rule the particular case must fall under the universal case, and must fulfill the initial conditions. That is, the particular (singular) statement must be deduced from both the hypothesis and the initial conditions. Therefore, if Abdullah does not meet the conditions of 90 credits and 3.0 GPA, his failure to pass the test does not lead to the falsification of the theoretical hypothesis.

Yet Popper's falsification methodology, and its philosophical foundation of "critical rationalism," exhibit a great deal of naivety, for it fails to see that falsification cannot be achieved on the level of experimentation. The scientist usually makes use of a number of auxiliary premises or assumptions, and the negative results of the experiment can always be blamed on an auxiliary assumption. Even when auxiliary assumptions are not used, or cannot be faulted for the negative results of the test, the scientist can always introduce *ad hoc* assumptions to evade falsification. The argument to avoid falsification may be expressed as follows:[211]

> If (p and a) then q Not q
> Thus not (p and a) Not p or not a

P
Thus not a (where a is an auxiliary assumption)

Although Popper developed his methodological approach of falsification by contemplating natural science, he later expanded its use for the study of social phenomena. In *The Poverty of Historicism*, and later in *The Open Society and Its Enemies*, Popper denied that social phenomena and social laws are intrinsically different from the laws of physics. He therefore called for the employment of a method patterned after the "conjecture and falsification" method of natural science, which he called "social engineering."[212] While rejecting the notion that value can be derived from facts, advanced earlier by Durkheim, he insisted that sociological laws must be derived from social facts, or "social institutions." Like Durkheim, he denied that the study of human consciousness or psychology is relevant to the understanding of social phenomena. As he put it:

> In speaking of sociological laws or natural laws of social life, I do not think so much of the alleged laws of evolution in which historicists such as Plato are interested...Nor do I think so much of the laws of 'human nature,' i.e. of psychological and socio-psychological regularities of human behavior. I have in mind, rather, such laws as are formulated by modern economic theories, for instance, the theory of international trade, or the theory of trade cycles. These and other important sociological laws are connected with the functioning of 'social institutions.'[213]

The claim that naturalistic methods, developed for studying physical phenomena, are adequate for the study of social phenomena can be granted only when the two types of phenomena do not have any intrinsic differences which limit the applicability of naturalistic methods, a claim advanced by both Durkheim and Popper and asserted by mainstream Western social science. The question which we have to raise here may be put thus: are social and natural phenomena, and hence social and natural laws, of the same nature? It is true that the

phenomenon of law is not peculiar to human society, but a universal one permeating the whole of existence. In its simplest form, law refers to regularities and similarities in the behavior of persons and things. At first glance, law seems to involve a variety of principles describing general patterns of behavior, both in the natural and social order. That is to say, the behaviors of things and persons seem to be governed by general principles revealing themselves through regularity and harmony of movement and action.

Yet on closer examination, one can recognize a profound and significant difference between laws regulating natural behavior and those regulating social behavior. The difference between the natural and social orders lies in the fact that while the former is subject to *laws of necessity,* the latter is affected by *laws of freedom.* Things behave in accordance with specific patterns out of sheer necessity; the relations between things are therefore based on the principle of causality, whereby every element of nature interacts with every other element in a cause-and-effect manner. Human behavior, on the other hand, is determined by free choice. People do not behave out of necessity, but rather of possibility, for they always have (at least in theory) options to choose from. The human will is free, and human action is thus the outcome and result of the free choice of the will. But if human action belongs to the realm of freedom and possibility, it does not necessarily follow that people behave arbitrarily or randomly, at least not from the subjective point of view. Rather, human action is always purposive, aiming at procuring some objects or achieving some objectives. Whether the objects of the will are significant or trivial, noble or lowly, is irrelevant here; what is central to the notion of purposeful will is the assertion that action without purpose is impossible.

Nor does the freedom of human action mean that the will is immune to outside pressures precipitated either by natural causes or human agents. After all, man himself is part of the natural order and has to satisfy the physical needs of his body and protect it against all harm that may be caused by others. The significance of human freedom lies in the fact that external pressures do not act directly on the will in a mechanical or causal manner, but rather indirectly through psychological means. That is, although natural and social forces attempt to influence

individual behavior through reward and coercion, they succeed only insofar as man chooses to succumb to external threats or temptation. Society, for instance, attempts to control social behavior through the use (or the threat) of force; but the individual may choose not to comply with outside pressures even at the expense of life itself.

In short, human volition belongs not to the realm of necessity but of possibility and freedom; that is, the efficient reason of human volition is not cause but purpose.

But if the human will is capable of choosing its own purposes, practical considerations place limitations on one's ability to realize these purposes. This is because the realization of one's objectives takes place in the actual world where the possibility of encountering circumstances conducive to the realization of these objectives is determined by social conditions. This means that one's ability to realize his objectives is contingent on his ability to overcome social and natural obstacles. In other words, one's ability to realize one's purposes in life, and hence to overcome natural and social barriers, depends on social coordination among individuals who share similar purposes. Yet if the human will is to maintain its freedom and be able to both set goals and realize them, the human being must see to it that the efforts he exerts to achieve his purposes in life will not be frustrated by the wills of other people whose purposes may conflict with his own. This means that the regularities of social interaction are the outcome of unity of purpose among the members of society, or at least unity of purpose of the dominant group. Consequently a scientific study of social regularities requires that analysis be done on two levels, the individual and the communal.

The study of individual action allows us to identify the *rules* which guide individual action. These are of two types: *normative*, signifying the intention of the actor, and *technological,* consisting of the various skills of which the actor is capable. Communal regularity marks the unity of the normative and technological rules. It follows that causal explanation of social action is possible only when, and insofar as, the uniformity of action is assumed.

Conclusion to Part III

For the most part, modern Western methods have been geared towards studying natural and social phenomena. As a result, the methodologi¬cal concerns of Western scholarship have focused on the perfection of inductive methods and social analysis. Text and textual analysis were relegated to obscurity early on in the advancement of modern Western intellectualism.[214] Even so, Western scholarship has made important con¬tributions towards the advancement of empirical methods.

Gradually, however, the focus on empirical methods was elevat¬ed into an empiricist methodological approach which limited truth to empirical truth. Similarly, analysis of action gradually gave way to behavioral analysis whereby human purposes and intentions were either negated or at best reduced to those purposes and intentions con¬nected with the social and material survival of modern Western man. The rise of naturalistic social science methodologies, adopting the methods of natural sciences, is symptomatic of this trend.

Indeed, these naturalistic tendencies have been quite powerful among Western scholars, empiricist or otherwise. As we saw in the foregoing chapter, even Popper, who rejected empiricism, continued to espouse naturalistic methods. Like Kant before him, Popper was able to overcome the simplicity of empiricism by re-emphasizing the autonomy of human reason. Unlike Kant, however, he was able to do so at the expense of undermining the cohesiveness and the systematic nature of human rationality. Ultimately, both contributed to the con¬finement of human knowledge to the realm of empirical phenomena and the concept of truth to empirical truth.

Yet, the failure of Western rationalists, both the "comprehensive" and the "critical" (to use Popper's terminology), should not come as a surprise. For in the absence of a revelatory source to enlighten human reason about the nature of the total reality, rationality is indeed incapable of transcending its physical surroundings. The most it can do is to

acknowledge the necessity of a transcendental and supernatural reality for sustaining the natural and for explaining its orderly nature.

A true understanding of the empirical aspects of human existence is not possible without a more profound understanding of it that aims at discovering the underlying order of human existence. But for that, the transcendental insight embodied in the Divine Text is indispensable. Hence, the methodology which can enable us to make use of the Divine insight must be able to incorporate both textual and contextual analysis. The nature of this methodology and the justification of the incorporation of the Divine source into scientific research are the con¬cerns of the next chapter.

Part IV

IN SEARCH FOR AN ALTERNATIVE

7 CHAPTER

TOWARDS AN INTEGRATIVE APPROACH TO STUDYING SOCIAL PHENOMENA[215]

Forging a new methodology capable of analyzing complicated social phenomena on the one hand, and facilitating the derivation of rules and concepts from Revelatory sources on the other, is one of the paramount concerns of contemporary Islamic scholarship, and the sole concern of this chapter. In dealing with this concern, the chapter pursues two main goals: 1.) underscoring the need for reestablishing Revelation as a normative source of social theorizing, and 2.) outlining a model of a unified methodological approach for analyzing the presuppositions of social phenomena.

The first difficulty confronting any attempt to develop an alternative methodological approach rooted in Islamic ontology lies in the exclusion of Divine Revelation from the realm of scholarly investigation. It is true that this exclusion originated within the confines of the positive traditions as a result of the internal conflict between the religious and scientific communities in the modern West. It is also true that Revelation and scholarship were never perceived to be mutually exclusive in the Islamic tradition. Yet Muslim scholars can hardly ignore the fact that Divine Revelation is excluded from modern scientific activities. It is for this reason that we choose to begin our discussion by exposing the grounds for recognizing Revelation as a normative source of scientific knowledge.

The onslaught on transcendental knowledge, leading to its exclusion from scholarly endeavors, occurred through two phases. First, Revelatory sources were equated with ungrounded metaphysics and established as a rival body of knowledge, contradistinguished to the body of knowledge deemed to be true by reason.[216] Then it was asserted, *à la* Kant, that scientific activities should be confined to empirical real-

ity since human reason cannot ascertain transcendental reality. In what follows, I argue that scientific activities do presuppose metaphysical knowledge and are indeed impossible without transcendental presuppositions. Further, I contend that the truth of Revelation is rooted in empirical reality, and that the quality of evidence supporting revealed truth is of no less credibility than that justifying social truth.

THE METAPHYSICAL PRESUPPOSITIONS OF EMPIRICAL KNOWLEDGE

To begin with, the efforts to separate transcendental (i.e., metaphysical) truth from scientific research is both wrong-headed and untenable. For, not only is the knowledge of the physical rooted in the metaphysical, but also the latter is not altogether divorced from the former. To appreciate the interconnectedness of the two, one has to remember that science and scientific activities are the result of a specific ontology which relates the scientific endeavor of the individual to his environment, and furnishes their motivational basis. Put differently, scientific activities presuppose a number of assertions about the nature of existence, the truth of which has to be acknowledged prior to any engagement in empirical studies. Among these metaphysical assertions, the following three stand out:

> First, the natural world is governed by laws which endow the behavior of natural objects with order and regularity.
>
> Second, the laws governing natural order are rational, and hence discoverable by human rationality.
>
> Third, knowledge is an important human value, superior to ignorance.

These three transcendental principles are presupposed by all scientific activities and rooted at the foundation of scientific tradition. Yet, they are the type of assertions which cannot be examined by the methods currently accepted by modern Western scientific tradition. Still, science as a vocation owes its existence to such transcendental principles.

In a recent work published in 1990, James Rosenau, a leading scholar of international relations, contended that the seemingly disordered nature of international relations results from failure to discover the underlying order lying beneath the apparent disorder of world politics. Explaining the ground for insisting on the *orderly* nature of international *disorder*, he wrote:

> While it may at first seem absurd to search for order beneath the disorder of world affairs, this contradiction is resolved when it is recognized that two different concepts of order are involved. In one case, the concept denotes the presumption of causation, the idea that there is a cause for every effect, that nothing happens at random. The causes may not be presently knowable because the technology, resources, or time necessary to observe them is not available, but the premise of an underlying order springs from theoretical and not empirical possibilities. That is, when causative rather than random factors are presumed to be operative, nothing is theoretically beyond comprehension. In this sense, the world is, by an initial, improvable (but also irrefutable) assumption, an orderly place even though it may also be baffling and mysterious because the tools of observation are inadequate to the tasks of explanation.[218]

What Rosenau fails to state is that it is not simply a belief in causality that justifies the postulation of an order beneath the observed disorder, for causality could only establish linkage between an antecedent and a consequent. Rather, the postulated order is rooted in a suppressed belief in a transcendental order and in the rationality of the world.

In addition to constituting the basis of metaphysical assumptions of science, a belief in a transcendental order is the foundation of scientific impetus. It is true that scientific activities can be motivated by utilitarian considerations; however, such a motivational basis was hardly possible in the early stage of the scientific tradition when the rewards for scientific endeavor were not immediately forthcoming.[219]

It is worth noting that the emergence of a utilitarian grounding of

ethical behavior in the Western tradition coincided with the increased emphasis on positivistic approaches and the decline of interest in the transcendental. Through all these formidable changes, however, the transcendental principles which gave rise to science continued to form the metaphysical foundation for all scientific activities, a foundation which was widely presumed but rarely acknowledged.[220]

But the dependence relationship between the empirical and transcendental knowledge is not one-sided whereby the empirical is always dependent on the transcendental. Rather, the state of dependency is a reciprocal one in which the truth of the transcendental principles is empirically substantiated through their manifestations. That is to say, although the transcendental principles of a postulated universal order are rooted in religious beliefs, the truth of these principles is manifested in the empirically observable behavior of objects.

HUMAN RATIONALITY AND DIVINE REVELATION

We saw earlier that the undermining of Revelation as a source of knowledge in the Western tradition began by contrasting scientific with transcendental knowledge. That is, revealed knowledge was excluded from the realm of systematic knowledge by equating it with mystical faith while science was grounded in "rationality." It was therefore only a matter of time before knowledge founded on Revelation was relegated to the realm of irrationality. The question which has to be posed here may be stated as follows: is the distinction between reason and Revelation possible?

To answer this question we need, first, to examine the internal structure of both reason and Divine Revelation. The term revelation refers to a body of written statements in the form of a discourse which makes far-reaching claims about the origin, nature, and destiny of man and the universe and prescribes a set of rules for guiding individual and collective action. Under the heading of Divine Revelation one can find several discourses, which, though sharing certain common features, have some important differences.[221] The term reason, on the other hand, has two distinct references. Reason is sometimes used to denote a number of self-evident principles which govern the process

of thinking of mentally competent people, regardless of their cultural or educational background. The most basic principle of reason which has been widely acknowledged is the principle of non-contradiction. According to this principle, the simultaneous assertion and denial of the same proposition is impossible. Reason, according to the foregoing conception, is an instrument or canon used for examining the coherence of a body of statements. This examination allows us to conclude that the examined statements are either coherent, and hence in conformity with the principles of reason, or contradictory, and thus in violation of reason. As such, Revelation can be deemed irrational only when it contains contradictory statements.

Yet the term reason is frequently used to denote the capacity of rational beings to acknowledge the truth of certain assertions and deny the truth of others. At first glance, reason appears, according to this second conception, as a human faculty, an *organon* possessed by all human beings. On closer examination, one can see that what is called reason in the second usage of the term is a body of knowledge which has been examined and systemized by the principles of logic. Further, our examination of the second conception, i.e., the systematic body of knowledge, reveals that what is called *reason* and *reasonable* consists of (1) transcendental assertions whose truth is postulated, and (2) empirical assertions whose truth is based on sensory experience. In other words, reason in the second conception possesses a structure which resembles very closely the structure of Revelation. Clearly, only by being a body of knowledge can reason pose itself as a rival to Revelation.

The above conceptualization of reason leads to three important conclusions.

First, whether it is perceived as a mental instrument (*canon*) or a mental faculty (*organon*), reason manifests itself through a number of universal principles (e.g., identity, non-contradiction, excluded middle, causality) and procedures (abstraction, analysis, synthesis) employed by the human being for ascertaining the truth of assertions. As such, reason has to be associated with the methods and mechanisms used in science, and hence cannot be seen as a source of knowledge.

Secondly, the denial of the capacity of systematic reasoning for establishing the validity of Revelation as a source for the presupposi-

tions of scientific knowledge can be attributed neither to the nature of the revealed assertions, nor to the structure of Revelation itself for both reason and Revelation consist of transcendental and empirical assertions. It is safe to say, therefore, that the complete exclusion of Revelation from the realm of systematic knowledge is not the result of any inherent contradictions between the universal elements of Revelation and reason. Rather, it has to be attributed partly to the internal contradictions between reason and positive religion and partly to the historical conflict between the scientific community and organized religion in medieval Europe.

Thirdly, although scientific tradition in the West has postulated all along the irrelevance of Revelation and religion to scientific endeavor, it has, nonetheless, appropriated a number of metaphysical assertions rooted in the worldview furnished by Divine Revelation, albeit without ever acknowledging its indebtedness to the Divine.

This observation underscores the importance of reason as epistemological and methodological principles in examining and ascertaining truth claims derived from revelation and from reason as a body of knowledge. The examination requires the employment of the full scope of the methodological tools discussed earlier in this book. The remainder of this chapter suggests a scheme for doing that in a systematic and consistent manner.

REVEALED AND EMPIRICAL REALITY: THE QUALITY OF EVIDENCE

In light of the foregoing discussion we may define science in terms of those activities aimed at ascertaining the truth of the various assertions made about the nature of reality. The modern, Western exclusion of Revelation from the realm of science is not based on a denial of the fact that Divine Revelation makes assertions about the nature of reality, for it obviously does. The exclusion is based, rather, on the claim that only empirical reality can be ascertained. Since non-empirical (metaphysical) reality is not susceptible to verification through experiments, it cannot be included in the realm of science.[222]

The above argument is both simplistic and misleading because

it ignores and obscures the nature of both revealed and empirical evidence. The argument overlooks two essential facts. First, our knowledge of empirical reality is not based on knowledge received immediately and empirically from the environment, but on theories that describe the underlying structures of reality. These structures are never immediately encountered by the senses. Instead, these structures of empirical existence are inferred through the use of categories abstracted from the sensible and mediated by purely "rational" categories and statements. Using Lockean terminology, we could say that the theories we use to describe empirical reality consist of complex propositions acquired by combining a number of simple propositions. Therefore, our understanding of the relationship between the earth and the sun is mediated by mental constructs, and hence is completely at variance with the immediate impression received from the senses.

Second, the foregoing argument fails to see that Revelation (at least in its final and Islamic form) seeks its justification in empirical reality. From the point of view of Divine Revelation, empirical reality is the manifestation of a transcendental reality, and hence it can have a meaning only in relation to the transcendental. Indeed, the Qur'an abounds in verses (or signs) that emphasize the interconnectedness of the empirical and the transcendental.[223]

Most importantly, Revelation underscores the important fact that the empirical is meaningless when it is severed from the whole, which, as Western science is willing to admit, transcends the boundaries of empirical reality.[224]

As such, Revelation has to be approached not as an immediately accessible set of statements, but as a given "phenomenon" consisting of signs of which understanding requires constant and recurring interpretation and systematization. Indeed, the Qur'an makes it abundantly clear that it consists of "signs" (*ayat*) of which understanding is contingent on the process of thinking, contemplating, and reasoning:

> Verily, in these things are signs for those who consider (13:3);
> We detail our signs for people who know. (6:97).

The foregoing observation underscores the fact that to understand

the truth of Revelation one has to approach it in the same manner one approaches social phenomena or even natural phenomena. For this reason, the truth of all these phenomena is contingent on the ability of the theories which scholars and scientists construct on the basis of data generated by these phenomena to produce consistent and "satisfactory" explanations of experienced reality.

Regarding Revelation as a phenomenon, and hence as a source of knowledge, can be justified by citing another reason. The quality of evidence used to ascertain (i.e., to demonstrate objectively) the reality described by empirical theories is of no higher caliber than that employed to ascertain the reality described by Revelation. In *both* cases, the existence of the considered phenomenon is ascertained by being concomitantly borne in the consciousness of numerous individuals who have had the chance to experience firsthand the basic elements of the phenomenon. That is to say, as the social or physical phenomena can be ascertained by persons who have experienced the various elements comprising them, so can Divine Revelation be ascertained by persons who have experienced the truth of the various signs comprising it. In both cases the truth of the immediately-acquired is intuitively ascertained with the only difference being that empirical reality experienced through the senses is apprehended through empirical intuition while transcendental reality experienced through Revelation is apprehended through pure intuition.

It is true that Western science, beginning with Kant, has confined intuition—the unity of the apprehended elements of a phenomenon—to empirical intuition, denying that transcendental elements can be apprehended. But Kant, as we saw earlier, was able to achieve this reduction by confusing the process of pure intuition. For while Kant correctly conceived pure intuition as "all representations...in which there is nothing that belongs to sensation,"[225] he insisted nonetheless that the use of pure intuition should be limited to empirical reality. But if pure intuition is obtained as a result of successive abstraction from the multiple representations acquired by empirical intuition, leading to a singular representation in which all concepts are united, Kant's refusal to recognize the transcendental reality apprehended by pure intuition is both arbitrary and dogmatic.

REVELATION AND SOCIAL SCIENCES

We have concluded in the previous section that Revelation[226] cannot be excluded from science because it constituted the presuppositions that lie at its foundation. This is particularly true with regard to the area of scientific research known as social or human sciences. It is quite clear that here the influence of transcendental principles emanating from Divine Revelation is not confined to providing the basic conceptual and motivational foundation of the social sciences, but extends to the formation of the central theoretical elements of these sciences. Take, for instance, the important idea of human equality. The principle of equality lies at the center of modern political theory. Obviously, human equality is a transcendental principle that can be traced to Divine Revelation. In Greek and Roman traditions people were never equal. They were divided into the sons of the gods on the one hand, and barbarians on the other. The same attitude existed among nomadic Arabs who claimed racial superiority over other races. It was the Islamic tradition, and to a lesser extent the Christian tradition, which emphasized the equality of mankind.[227] Yet the principle of equality is a transcendental and does not lend itself to empirical verification. In fact, historical records of humanity show that for the most part human beings have been unequal.

The fact that modern empiricism continued to embrace principles and concepts generated within traditions rooted in Divine Revelation shows that the process of secularization in the West aimed, in the first instance, at undermining ecclesiastical authority and not at the complete repudiation of religious beliefs and values. Many religious ideas and values, such as freedom, equality, or the rationality of the universal order, became secular "values" and "beliefs."

But while modem Western sciences could emerge only by repudiating the Christian tradition and undermining Church authority, the classical Islamic sciences were inspired by revealed beliefs and values. Following are a few examples of Qur'anic statements which illustrate the importance Islam assigns to truth seeking and scientific research:

> And pursue not that of which you have no knowledge; for every act of hearing or of seeing, or of (conceiving in) the mind will be inquired into. (17:36)

> Many were the ways of life that have passed away before you: travel through the earth and see what was the end of those who rejected Truth. (3:137)

> Say: Travel through the earth and see how God did originate creation. (29:20)

> Say: Are they equal, those who know and those who do not know? (39:9)

> Allah will raise up many degrees in stature those of you who believe and who have been granted knowledge. (58:11)

Therefore, the Islamic scientific tradition has never experienced any crisis similar to what occurred in the Western tradition. This clearly shows that the science-Revelation conflict is neither imperative nor universal, but specific to Western experience and Western religion. Any attempt to reproduce this conflict in Muslim culture is hence artificial and inspired by an irrational desire to walk in the footsteps of another culture.

SOURCES OF KNOWLEDGE

Divine Revelation has always been for classical Muslim scholarship a source of knowledge, but it was never considered the sole source. Early Muslim scholars recognized the general nature of the Revealed Discourse, the Qur'an. They realized that in order to derive rules and concepts from the Divine Text, they needed to acquire detailed knowledge about the structure of both language and reality—hence the terms *qarīnah lafẓiyyah* (verbal evidence) and *qarīnah haliyah* (existential evidence) which were frequently employed by Muslim scholars when using linguistic and practical knowledge to explain the text.

But while early Muslim scholars developed elaborate schemes for analyzing the Divine Text, their analysis of social and historical structures was never based on an articulated and well-developed methodology. Consequently, their knowledge of society and history was based on common sense. It was not until the time of Ibn Khaldūn that the Muslim scientific tradition witnessed a serious attempt to develop theories for explaining social interaction by identifying historical patterns. Although Ibn Khaldūn was able to introduce highly matured theories of society and history, he never discussed the methodological foundation of his theorizing. Nor did the Muslim scholars who followed him make any attempt to elaborate the methodological approach he employed.

> The imbalanced growth of textual methods at the expense of practical and historical methods led to conceptual distortions, especially in those fields of inquiry where knowledge of the structures of society and social/political organizations was essential. Nowhere is this imbalance more apparent than in treatises intended to outline the structure of the Islamic political order. Al-Mawardi, for example, insisted that the designation (*'ahid*) of the incoming head of the Islamic state by the outgoing head is legitimate. He predicated the legitimacy of the designation procedure on the precedent set by the designation of ‘Umar ibn al-Khattab by Abu Bakr, a designation, he argued, supported by the consensus (*ijma‘*) of the Muslim community.[228]

Yet neither did al-Māwardī, nor any of the classical scholars who accepted the legitimacy of the designation procedure, undertook a systematic and probing analysis of the actions of the *Sahābah* (the Prophet's companions) so as to isolate the rules which guided them, and then to ascertain their compatibility with the political principles of Sharī‘ah. Because of the absence of mature methods which could facilitate a profound analysis of the purposes and rules determining the actions of early Muslims, or the social and political structures governing their interactions, classical scholars unwittingly elevated to the sta-

tus of universality the actions of a historically determined community and idealized the behavior of fallible human beings.

While classical Muslim scholars considered the records of history a source of knowledge alongside Revelation, they could not make full use of this source for two reasons. First, with the exception of Ibn Khaldūn, classical Muslim scholars were primarily interested in identifying social and political models to be recreated and in specifying exemplary behaviors to be emulated. They were not interested in discovering patterns of behavior or isolating general tendencies which could be used to explain political interactions and social relations. Second, as a result of the first reason, classical Muslim scholars had never developed a methodology for analyzing social phenomena. The example set by Ibn Khaldūn came too late in the evolution of Muslim scholarship and despite its impressive maturity, had no following in Muslim tradition. Its resounding impact took place in the Western tradition. But in the West, the scientific and methodological imbalance took an opposite form. The distortion in the West was slanted toward the social and practical at the expense of the Revealed.

In light of the foregoing discussion, the task of developing a balanced scientific methodology should have a twofold aim. First, the new methodology should include procedures for deriving rules (law-like statements) from both Revelation and history. Second, the desired methodology must allow the integration of rules derived from the two sources. I will attempt in the remainder of this chapter to sketch the general framework of a unified methodology for textual and contextual analysis.

THE REVEALED SOURCE: THE RULES OF TEXTUAL INFERENCE

Divine Revelation is given to us in the form of Qur' anic discourse. The Qur'an is elaborated and expounded by prophetic statements and deeds compiled in the form of Hadith. The Qur'an itself consists of statements revealed in a piecemeal fashion throughout a period stretching over twenty-three years. Qur'anic statements provided early Muslims with a universal worldview and directed their actions through their

struggle to establish a community, an *ummah,* based on the principles of Islam.

The Qur'anic discourse is truly unique in its style and approach for it is not organized in a thematic fashion whereby an issue or an event is exposed at once in its entirety before the next issue is discussed. Rather, one finds facets and aspects of a question or an event revealed in different surahs and *ayahs* of the Revealed Book. This means that in order for the reader to understand the Qur'anic view or position regarding a specific question, he has to treat the Qur'anic discourse as a comprehensive whole; any attempt to determine the Qur'anic position regarding a human act by contemplating isolated Qur'anic statements is bound to lead to inconsistencies or outright misconception. Take, for example, the following Qur'anic statement from *Surat al-Nisā'*:

> O you who believe! Approach not prayers with a mind intoxicated, until you can understand what you say. (4:43)

Based on the above statement, the Qur'anic position concerning the consumption of intoxicating substances denotes a prohibition of their use shortly before the performance of prayer. Yet, the rule derived from the above *ayah* is only partially correct. The completely correct Qur'anic position concerning the consumption of intoxicating substance can be found in another *ayah* in *Surat al-Mā'idah,* which represents a more pronounced stage in the progressive war against intoxicants:

> O you who believe! Intoxicants, gambling, (dedication of) stones, and (divination by) arrows, are an abomination of Satan's handiwork: eschew such (abominations) that you may prosper.
> (5:90)

Therefore, to derive rules and concepts from Divine Revelation, we need to employ a method sufficiently developed to allow the derivation and systematization of these rules and concepts. The method proposed here is comprised of four procedural steps (see diagram 1):

Step one aims at identifying all statements, both Qur'anic and prophetic, relevant to the question at hand. For example, to determine the Qur'anic position regarding the relationship between the ruler and the ruled, one has to compile Qur'anic statements relating to the terms *imām* (leader), *uli al-amr* (ruler), *ṭā'ah* (obedience), and *naṣr* (support). A comprehensive survey of the Qur'anic statements shows that the four terms cited above appear in the following *ayahs*:

1. *Imām*: 15:79, 36:12, 2:124, 11:17, 25:74, 46:12, 17:71, 9:12, 21:73, 28:5, 28:41, 32:24
2. *Uli al-amr*: 4:59, 4:83
3. *Ṭā'ah*: 43:54, 24:51, 33:67, 25:52
4. *Naṣr*: 9:40, 7:157

It should be stressed, however, that identifying the relevant *ayahs* is not a mechanical procedure, but involves a good deal of analysis and familiarity with semantic usages.

Step two involves an attempt to understand the meaning of relevant Qur'anic statements, individually and in relation to one another. Interpretation of revealed statements requires, first, that the rules of the Arabic language in which the Qur'an was revealed be observed.

Any interpretation which violates these rules is bound to lead to distortions. Many of the distorted interpretations of the Qur'an which we are aware of have resulted from the liberal use, especially by *Shī'ah* and Sufi scholars, of metaphoric analysis of the text, even when the rules of metaphor do not permit such interpretations. For example, the *Shī'ah* scholar 'Ali ibn al-Husayn ibn Babawaih al-Qummi interpreted the ayah: "Say: see if your stream be some morning lost (in the underground earth), who then can supply you with clear-flowing water?" (67:30) in the following terms: "This *ayah* was revealed in relation to the established imam, saying if your imam disappears one morning, who will bring a known imam?"[229]

Clearly the metaphoric interpretation of Ibn Babawaih al-Qummi violates the first rule of metaphoric interpretation which stipulates that only when the literal meaning of the text is deficient, a metaphoric interpretation called for. However, the literal meaning of the above

mentioned *ayah* is far from being deficient or incoherent. The literal meaning is quite clear for it reminds people of Allah's favors on them and exhorts them to heed the warning of Allah, lest He deprives them of the goods they take for granted.

The meaning of Qur'anic statements cannot be apprehended simply by analyzing the lexical usage of their individual terms. Rather, the meaning of each statement must be determined within three interrelated contexts: textual context (*sīyāq naṣi*), discursive context (*sīyāq khiṭādbī*), and existential context (*sīyāq hali*). That is to say, the Qur' anic verse must be understood first, in the context of the chapter of which it is a part, then in the context of the entire Qur'anic discourse, and finally in the context of the socio-historical events that accompanied its Revelation.

he third context, the existential, is what is generally known in *tafsīr* (Qur'anic exegesis) by the phrase *asbāb al-nuzūl* (reasons of Revelation). Indeed examining the existential context of a statement is very crucial for its correct interpretation. This is quite apparent in understanding the meaning of *fāsiq* in the following *ayah:*

> O you who believe! If a *fāsiq* (unprincipled) person comes to you with any news, ascertain the truth, lest you harm people unwittingly, and afterwards become full of regret for what you have done. (49:6)

The term *fāsiq* is used in the Qur'an to denote a person who, despite his awareness of the principles of rightness, succumbs to his whims and vain desires. Therefore, an interpretation based solely on the lexical meaning of the term points to the need for ascertaining the truth of the received news only when the person who brought them is a known *fāsiq.* Yet upon examining the events which accompanied its Revelation, a new picture emerges. Ibn Kathīr narrates (on the authority of Mujāhid and Qatadah:) that the Messenger of Allah sent

> al-Walid ibn 'Ugbah to Banu al-Musta'liq to collect *zakah.* (When they learnt of his arrival) they came out (to receive him at the outskirts of their town) to give him the *zakah.*

> (Upon seeing their masses marching towards him) he turned back to Medina and told the Prophet that Banu al-Musta'liq are marching to attack you, and that they have abandoned their commitment to Islam. The Prophet then sent Khalid ibn al-Walid to investigate the matter, and ordered him to carefully inquire (into the truth of the matter) and to avoid hasty decisions. (Khalid) arrived near their town at night, and (immediately) dispatched scouts. They came back with the news that (Banu al-Musta'liq) were still committed to Islam, and that they have heard their *adhan* and prayers. At morning Khalid visited them and was pleased with what he saw. He (later) went back to the Prophet, and informed him about his findings. Thus Allah revealed the *ayah*.[230]

The above narration gives us a markedly different understanding of the *ayah*, for it shows that ascertaining the truth of the received news is required not only when the person who brings it is a known *fāsiq,* but even when his *fāsiq* tendency is still not evident. For clearly, had alWalid been a known *fāsiq,* he would not have been trusted with the important task of collecting the zakah on behalf of the Prophet himself. Evidently, the collection of the zakah was a trying mission for al-Walid, because it revealed his lack of courage, as well as his willingness to exaggerate and use his imagination to cover his fear, the cause of his failure to complete his mission.

Step three is concerned with the *ta'lil* (explanation) of the text, i.e., identifying the efficient cause (*‘iilah*) for which the command or directive embodied in the text was made. Or, alternatively, the objective in this step is to identify the common property or attribute, possessed by different objects, which justify the use of the same term for their reference. Identifying the *ʿillah* of a ruling is a first step in the endeavor to discover the universal principles which regulate and govern the various pronouncements of *Sharī‘ah.* For example, scholars have contemplated the *ʿillah* of the following *Sharī‘ah* rulings:

1. Prohibition of selling *juzaf* (unmeasured) for *makil* (measured) commodities.

2. Prohibition of selling of *ghā'ib* (absent) commodities.

They discovered that the *ʿillah* of the prohibition in both cases was the protection of the buyer against deception (*gharar*).[231] By understanding the general principles embodied in the two rulings, we are able not only to extend the application of these principles to other transactions which have not been ruled upon by Revelation, but we can even allow the selling of the unmeasured or the absent if the buyer can be protected from becoming a victim of *gharar* (deception). For instance, if the buyer can be guaranteed the quality of the product beforehand, or if he can be permitted to return the product if it does not meet his conditions after he receives it, then the selling of the absent can be permitted. Indeed, Muslim jurist have permitted what they referred to as *ᶜaqd al-istisnaᶜ* (the contract of manufacturing) on this basis.

Because the process of *ta'lil* frees us from social and historical contingencies, it is more crucial for analyzing textual statements that relate to social and political action. The *ayahs* dealing with the rules of peace and war is a case in point. Here we find texts instructing Muslims to fight the enemies of Islam, while others encourage Muslims to establish peace when the enemy is inclined to stop fighting. Developing a clear understanding as to when peacemaking is desirable and when war is advisable requires an elaborate process of *ta'lil.*

Step four aims at bringing unity and order into the various rules and principles derived from the Revealed Text. This means that the various rules need to be built into a comprehensive and internally consistent system. This can be achieved through a process of successive abstraction whereby rules derived from the text are subsumed under another set of rules standing on a higher level of abstraction. This process should be repeated until a set of universal principles that cannot be further reduced is obtained. It is at this level of high abstraction that the ordering of the system of rules or law-like statements can be attained. Identifying the interrelationship among the various concepts becomes possible at a high level of abstraction since one is left with a manageable number of concepts to deal with; something which is definitely impossible at the level of immediate apprehension of reality.

Indeed, only at the level of high abstraction do we begin to get a grasp on the underlying structure of reality.

The process of successive abstraction, which also signifies a successive induction whereby the particular is subsumed under the universal, is followed by a process of successive deduction in which the internal consistency of the universal and the particular is ascertained.

The model outlined above is based on the principles (qawa'id) approach, an approach matured in the work of the Muslim jurist al-'Izz ibn 'Abd al-Salām al-Sulami, and was later developed into a full-fledged methodology in the theory of *maqāṣid* outlined by Ibrāhīm ibn lsḥāq al-Shāṭibī.[232]

THE HISTORICAL SOURCE: RULES OF HISTORICAL INFERENCE

The system of rules and concepts derived from the Revealed source of knowledge is insufficient for grounding action, for two reasons. First, because the system consists of general and universal rules, its application to particular cases requires further deliberation and specification. This can be done by incorporating information about the nature of individual and collective action and interaction. Second, the application of universal rules requires knowledge about existing conditions. Only when the theoretical conditions of an action correspond with its actual conditions does the application of the rule become possible. For example, to determine whether a specific human being, Zayd, should pay zakah, one should first identify the theoretical conditions of zakah payment, such as the possession of the *nisab* and being Muslim. Then it must be determined before the application of the zakah rule whether Zayd does indeed possess the *nisab,* and whether he is Muslim. Similarly, to determine whether a peace treaty should be signed between an Islamic state and a neighboring non-Muslim state, it is not sufficient to know the theoretical conditions; the actual conditions should be examined in order to determine whether they correspond with the theoretical.

A thorough study and analysis of human actions and interactions must, therefore, be undertaken before a revealed rule can be imple-

mented and that an appropriate methodology for the study of action must be identified. Yet methodologies developed by Western scholarship cannot be used by Muslim scholars for studying human phenomena for at least two reasons. First, the metaphysical foundation of Western methodologies, which is never explicitly discussed but always implicitly presupposed, does not accord with the ontology of Revelation. Second, many of the Western approaches are designed to deduce conclusions from models developed by contemplating Western experiences. That is to say, while Western models or systems are inductively built by abstracting from Western experiences, it is assumed that these systems are universally valid. Considering the ontological and ethical differences between the Islamic and Western scientific traditions, the need for models and systems which incorporate Muslim experiences and Islamic concerns is obvious.

To do this, the uniformity of human purposes, motives, and goals should be rejected, and social phenomena must be explained by analyzing their basic building blocks, i.e., human actions. Put differently, discovering the rules governing the underlying structures of social phenomena must begin by analyzing the basic elements which constitute these phenomena, namely human action. The analysis of action may be done through four steps (see diagram 2):

Step one aims at analyzing the actions of the individuals involved in the social phenomenon under consideration. By analyzing the action we mean disclosing its three determinants: purpose, motive, and rule. The purpose is the overall object which the actor sets out to realize. The motive of the action is, on the other hand, the psychological impetus of the actor; motivation to act stems either from a commitment to moral principle, or from self-interest. Finally, the rule is the technical procedure which the actor must follow in order to attain the purpose of the action.

To illustrate the above procedure let us take the example of party elections. One of the primary actors in a party election is the candidate. To analyze the action of a political candidate, the three components of action have to be identified. In this example, the purpose of the action is the end towards which the energy of the actor is directed, namely winning the election. The motive of the action could be a commitment

to a moral principle expressed in the form of a policy that the candidate embraces, material or psychological benefits to be attained by the candidate and his supporters, or the combination of both. Finally, the technical rule, relating to the means available to the actor, and whose employment is necessary for attaining the purpose, is reflected in the skills and techniques that the candidate can employ in his struggle to achieve the goal. Thus, winning the election unites the political candidate and his supporters into a purposive group. The unity of purpose among the members of the group is the result of either their shared value commitments or their shared interests. That is, the group's support to the candidate may result either from the latter's declared intention to actualize value commitments shared by the group through public policy or from the candidate's declaration that he will, say, reduce the tax rate, a measure which would benefit his supporters.

Step two deals with the classification of the various modes or types of action on the basis of the similarities or differences of the components. Actions that have similar purposes form a homogenous group while actions with different purposes divide the population into heterogeneous groups. Differences in technical rules divide each of the identified purposive groups into functional subgroups.

It should be observed that this step is not completely separate from the first one. Occasionally the division of the population into groups and subgroups precedes the in-depth analysis of individual actions. Since it is impossible to analyze the action of each and every individual, we often select individuals whose actions are considered representative of their groups. Yet the early grouping is usually done intuitively, and hence has to be modified and refined on the basis of the analysis of the actions of selected representatives from the various groups.

Step three involves the efforts to identify the universal rules which govern the interaction between the various groups identified in step two. To isolate the universal rules or laws of interaction, the patterns of cooperation and conflict, domination and submission, growth and decline should be comparatively studied across time and geographical space. Clearly, research in this area could be quite complex, and hence requires further elaboration.

Finally, in step four, the universal rules arrived at in the previous step need to be systematized in a fashion not different from the one employed in textual derivation. The systematization here must aim at eliminating internal inconsistencies within the system of rules acquired through historical derivation, as well as those derived from Revelation.

A UNIFIED METHODOLOGICAL APPROACH

A glance at the rules of textual and historical inference reveals a general pattern of scientific inference shared by both approaches. The general pattern may be summarized in the following five procedures (see diagram 3):

1. Analysis of the text/phenomenon into its basic components, i.e., statements/actions.
2. Grouping of similar statements/actions under one category.
3. Identification of the rules that unify the various categories.
4. Identification of the general rules and purposes that govern interaction/interrelation of various categories.
5. Systematization of the body of rules obtained through the previous procedures (i.e., eliminating contradiction).

The unity of the patterns of textual and actual (historical) inference is not confined to the similarity of the proposed procedures for textual and historical analysis, but is extended to the structure of both action and discourse. Both collective action and discourse consist of systems of rules and purposes which bring unity and coherence to each and allow comparison and contrast between the two. By comparing the rules and purposes of the system of action (social phenomenon) and the system of text (discourse), one can examine the extent to which the two are or are not compatible. The significance of this is twofold:

1. The system of rules derived from Revelation can be used as an evaluative framework, without confusing the ideal with the actual.

2. When actual practices depart from confessed rules and purposes (Divine or otherwise) the actual rules and purposes embodied in practices can be reconstructed and contrasted with the ideal.

THEORETICAL FRAMEWORK AND THEORY BUILDING

The set of universal statements derived from Revealed and historical records constitutes a theoretical framework, which serves as the basis of any theorizing about social phenomena. The system of history-based and Revelation-based rules is neither absolute nor closed. Rather, it is subject to a process of constant refinement and perfection. The perfection of the theoretical framework results from the efforts aimed at utilizing the body of universal rules available for the purpose of explaining social phenomena or guiding collective action. These efforts lead to theory building whereby specific rules and concepts are employed for explaining a specific phenomenon (see diagram 4).

The process of theory-building provides us with opportunities to verify, clarify, and enlarge the theoretical framework. The process of theory building takes place through two phases:

1. A set of universal principles is incorporated into a theory designed to explain or predict, and hence guide, the action of a specific human interaction.
2. The soundness of the theory is examined by contrasting hypotheses derived from the theory with observed actions or events. As long as the theory is able to provide us with clear explanations or accurate predictions, it should be considered sound. However, a repeated mismatch between the observed behavior and the deduced hypotheses indicates the incorrectness or inaccuracy of some of the universal rules, points to the inadequacy of the theory, and thus calls for modification in the developed theory and/or the universal rules and concepts.

CONCLUDING REMARKS

An attempt has been made in this chapter to provide a methodological approach which recognizes Revelation as a primary source of knowledge and aspires to employ both text and action analysis techniques as necessary tools for theory building. The technical procedures (i.e., methods) have not been identified in this chapter, but these can be appropriated from among the textual methods of classical Muslim scholarship and modern Western scholarship discussed in previous chapters, either immediately or after some refinement and modification.

The methodological approach delineated above provides us only with a model of social scientific inquiry. The model is meant to be a first approximation towards developing an alternative methodologies that engage the transcendental. That requires further elaboration, modification, and refinement whereby the interrelationship between rules derived from Revelation and those abstracted from experience is specified. This relationship, however, has to be determined separately within each of the various social science disciplines.

In addition to the important task of incorporating Divine Revelation into scientific research, the proposed methodology enjoys a number of advantages over the currently predominant Western methodological approaches, including the following:

First, while the approach allows us to generalize about the characteristics of groups from the analysis of representative members, it permits further modification and refinement of our conception of group behavior by looking into the actions of previously unexamined members. Indeed, it establishes the very fact that the procedures provided for by the proposed methodology allows the grouping of individuals on the basis of the similarities and differences of the components of action and guards against unwarranted assumptions of uniformity of behavior.

Second, the proposed approach combines an action-theory perspective with a systems-theory perspective. Consequently, while permitting us to deal with collective interaction as a system, it regards this system as an open one, capable of change. The approach, therefore, avoids the static nature of pure systems-theory approaches.

Thirdly, the proposed approach, while accommodating change, escapes the relativist tendencies of Western approaches geared towards recognizing differences and changes. In other words, the approach allows us to avoid both absolutism and relativism. The former is avoided because of the recognition of the transient nature of the theoretical framework derived from Revealed and historical records, and the latter by realizing that the framework itself is anchored in the Divine Truth of the Revealed source.

Finally, while the approach does not hide its ethical and ontological commitments, it does not, unlike Western methodologies, lend itself to ethnocentrism. The latter is the direct result of attributing universality to Western-based theory while embracing values and categories peculiar to western experience.

NOTES

1. Rene Descartes, *Discourse on Method*, trans. John Veitch (NY: Everyman's Library, 1969), pp. 15-16.
2. Ibid., pp. 12-5.
3. Ibid., p. 18.
4. Ibid., p. 26.
5. See David M. Rasmussen, *Reading Habermas* (Cambridge, Mass.: Basil Backwell, 1990), p. 21.
6. Kant, *Prolegomena to Any Future Metaphysics* (NY: Macmillan Publishing Company, 1988), p. 3.
7. Kant, *Critique of Pure Reason*, p. 55.
8. Ibid., pp. 105, 303.
9. Ismail al Faruqi, *Islamization*., p. 19.
10. AbdulHamid AbuSulayman, "Islamization of Knowledge," pp. 268-9.
11. Mona Abul-Fadl, "Nahwa manhajiyah lil-ta^{c}amui ma^{c}a al- Tanzir al-Islami," pp. 206-7.
12. Muḥammad ibn Idrīs al-Shāfi'ī, *Al-Risālah* (Dār al-Kutub al'ilmiyyah, n.d.)*, p.*19.
13. Ibid., p.40.
14. Ibid., pp.26-8.
15. Ibid., pp.31-3, 51-3.
16. Ibid., pp.27.
17. al-Shāfi'ī, p.39.
18. Al-Shāfi'ī, *Al-Risālah*, p. 39.
19. Al-Shāfi'ī, *Al-Risālah*, p.39.
20. Muḥammad ibn Aḥmad al-Sarakhsī, *Usūl al-Sarakhsī* (Beirut: Dār al Ma'rif, n.d.), p.9.
21. See for example Abū Ḥamīd al-Ghazālī, *al-Mustaṣfā min 'ilm al-Usūl* (Cairo: al-Matba'ah alAmiriyyah, 1322 A.H.); also Muḥammad bin Ahmad al-Tilmisani, *Miftāh al-Usūl* (Beirut: Dār 141-Kutub al-'ilmiyyah, 1403 A.H,/1983 A.D.), pp. 42-59.
22. al-Ghazālī, *al-Mustaṣfā,* vol. 1, p.30; also al-Ghazālī, *Mi'yar al-'ilm*, ed. Sulaiman Dunya (Dār al-Ma'arif, 1961), p.72.
23. Fakhr al-Din al-Razi, *Al-Mahsūl fī 'Ilm al-Usūl* (Beirut: Dār al-Kutub al-'ilmiyyah 1408 A.H./1988 A.D.), vol. 2, pp.76-7.
24. See a1-Ghazālī, *Mustaṣfā*, vol. 1, p.30.
25. 'Abd al-Qāhir al-Jurjānī, *Dala'il al-I'jaz* (Cairo: Maktabat Sunaj, 1380 A.H./1960 A.D.), pp.49-50.

26. Al-Sarakhsī, Usul al-Sarakhsi, vol. 1, p.236.
27. Ibid., p.241.
28. See Khalīfah Bā Bakr al-Hasan, *Minhaj al-Usūliyyin* (Cairo: Maktabat Wahbah, 1409A.H./1989 A.D.), pp. 64.
29. A1-Sarakhsī, vol. 1, pp.257-62.6.
30. ‘Amr ibn Bahr al-Jahiz, *Al-Bayān wa al-Tabyin*, ed. ‘Adbul Salām Muḥammad (Cairo: Lajnat aI-Ta'lif wa-al-Tarjamah walNashr, 1367 A.H./1948 A.D.), p.75.
31. Ibid., p.75.
32. al-Shāfī‘i, *al-Risālah,* p.477.
33. Ibid., p.507.
34. Muḥammad ibn ‘Ali al-Shawkani, *Irshad al Fuhul ila Tahqīq al-Ḥaqq min* ‘ilm *al-Usūl* (Dār alFikr, n.d.), pp.210-22; also ‘Abd Wahhab al-Khallaf, *‘Ilm Usūl al-Fiqh* (Kuwait: Dār al-Qalam, 1398 A.H.), pp.75-79.
35. a1-Ghazālī, *al-Mustaṣfā,* vol. 1, p.230.
36. Ibid., pp.250-2.
37. Al-Shāṭibī, *al-Muwāfaqāt*, vol. 4, p.165.
38. Ibid.
39. al-Shāfī‘i, al-*Risālah*, p.40.
40. Ibid., pp.104-5
41. al-Shāṭibī explicitly subordinates the *Sunnah* to the Qur'an; see *al-Muwāfaqāt*, vol. 4, p.7.
42. Ibid., pp.91-2.
43. Ibid., pp.15-25.
44. Ibid.
45. Related by al-Dāramī on the authority of Ibn ‘Abbās
46. A1-Sarakhsī, vol. 1, pp.133-142.
47. Al-Shāfi‘īi, p.222.
48. Al-Shawkani, p.71.
49. See al-Sarakhī, vol. 1, pp.301-7.
50. See for example ibid., p.313.
51. Hadith related by al-Tirmidhi in *Kitab al-Fitan*, also by Ibn Mājah
52. See Ibn Hazm for the interpretation of this Hadith, vol. 4, pp.497-8.
53. Abū Ḥamīd al-Ghazālī, *Al-Mustaṣfā min ‘Ilm al-Usūl* (Cairo: al-Matba‘ah al-Amiriyyah, 1322 AH), p.5.
54. Ibid., p.6.
55. Abū al-Ma‘ali al-Juwaynī, *Al-Irshad ila Qawati al-Adila Fi Usūl al-'I‘tiqad.* (Beirut: Mu'assasah al-Kutub al-Thaqafiyyah, 1405 AH/1985 AD), p.109.

56. Abū Bakr al-Bāqillānī, *Tamhid al-Awa'il* (Mu'assasah al-Kutub al-Thaqafiyyah, n.d,), p.25; also al-Juwaynī, p.33.
57. Abū Ya'la at-Farra', *Al-'Iddah fī Usūl al-Fiqh* (Mu'assasah al-Risālah, 1400 AH/1980 AD). pp.82-3; also al-Juwaynī, p.27.
58. Al-Ghazālī, *Al-Mustaṣfā,* Vol. 1, p.25-6.0
59. Al-Bāqillānī, *Tamhid,* pp.26-7; also al-Juwaynī, *Al-Irshad,* p.35.
60. al-Juwaynī, p.25.
61. Ibid., p.25.
62. Al-Ghazālī, *Al-Mustaṣfā*, pp.47-8.
63. Ibn Sīna, *Al-Najah (Cairo:* (Cairo: Matba'at al-Sa'dah, 1357AH/1983AD), p.66.
64. Abū Hayyan al-Tawhīdī. *al-Mugabasat*, ed. Hasan al-Sindubi (Cairo: al-Matba'at aI-Tijariyyah al-Kubra, 1347 AH/1929 AD), pp.70-74.
65. Ibid.
66. Ibn Sīna, *al-Najah*, p.3; also al-Ghazālī, *Mi'yar al-'Ilm*, ed. Sulaiman Dunya (Cairo: Dār al-Ma'rif, 1961), p.67.
67. See al-Ghazālī, *al-Mustaṣfā,* vol. 1, p.11.
68. Ibn Sīna, *Al-Isharāt wa* al-*Tanbihāt* (Cairo: Dār al-Ma'arif, 1960), vol. 1, pp.249-50.
69. lbid., pp.258-264; also Irving M. Copi, *Introduction to Logic,* (7th edn. MacMillan Publishing Company, 1986), pp.258-62; and Daniel J. Sullivan, *Fundamentals of Logic* (New York: McGraw-Hill Book Company, 1963), pp.67-8.
70. Ibn Sīna, *Al-Isharāt,* p.184.
71. Ibid., pp.203-4.7
72. Ibid., p.12; also Yūsuf ibn Abī Bakr al-Sakkākī *Miftāh al-'Ulūm,* (Beirut: Dār al-Kutub al-'Ilmīyah, 1983), pp.164-5.
73. Ibn Sīna, *al-Isharat,* pp.267, 269-70; also al-Sakkākī, *Miftāh*, p.440.
74. Ibid., pp.169-75.
75. Ibid., pp.184-5.
76. A negative (as opposed to affirmative) premise is one in which either the subject or the predicate is negative, e.g., no human is immortal.
77. For further discussion on the rules of the syllogism see Sullivan*, Fundamentals*.
78. See Ronald N. Giere, *Understanding Scientific Reasoning* (New York: Holt, Rinehart and Winston, 1984) pp.164-5. For a discussion by Muslim scholars see al Ghazālī, *Mi'yar al-'Ilm,* p.156; and Aḥmad ibn Taymiyyah, *Al-Fatawi*, ed. Abd. al-Rahman al-Najdi, vol. 9, pp.192-3.
79. Al-Sakkākī*, Miftāh,* p.504.

80. See for example al-Sakkākī, p.504; and al-Ghazālī*,* *Al-Mustaṣfā*, pp.51-2.
81. Al-Sikkākī, p.504.
82. al-Shāṭibī*, al-Muwafaqāt*, vol. 2, pp.29-39
83. Ibid., vol. 3, pp.43-4.
84. Ibid., vol. 3, p.8.
85. Ibid., p.105.
86. Ibid., p.11.
87. Ibid., p.51.
88. Ibid., pp.52-4, 61-3.
89. Al-Ghazālī denied that logic is rooted in Greek philosophy arguing that it was a rational science rooted in kalām, the art of thought. See *Tahāfut al-Falasifah* (Cairo: Dār al-Ma'ārif, n.d.), p. 71.
90. Ibid., pp.62-3.
91. See Ibid., pp.65-7.
92. Ibid., pp.76-8; quoted in Kamali, (translation), pp.14-5.
93. Ibid., p. 80; Kamali, (trans.), p.16.
94. Al-Ghazālī, *Tahāfut,* p.84; Kamali, (trans.), pp.18-9.
95. See for example, Ibn Rushd, *Tahāfut al-Tahāfut* (3rd edn. Cairo: Dār al-Ma'ārif, n.d.), vol.1, pp.6466, 216-19.
96. Here, in the Arabic text, the last passage of Ghazālī, which previously was given only in an abbreviated form,is repeated in full.
97. Ibn Rushd, *Tahāfut al-Tahāfut*, pp.79-82; Translation pp. 8-10.
98. Ibid., pp.365-7; trans., p.132.
99. Ibid., pp.372; trans., p.134.
100. Ibid., p.78, and pp.345-8.
101. Ibid., pp. 220-22, trans. pp.180-83.
102. Al-Ghazālī, *Tahāfut*, p.225; trans. pp.185.
103. lbid., p.226; trans. 186.
104. Ibid., p.229; trans. p.188.
105. Ibid., pp.229-31; trans. pp.188-9.
106. Ibn Rushd, *Tahāfut al-Tahāfut*, p. 785; trans. p.319.
107. Ibid., vol. 2, p.787; trans. p.320.
108. Ibid., vol. 2; pp.782-83; trans. p. 318.
109. Ibid., vol. 2, p.786.
110. Ibid.
111. A1-Ghazālī, *Mustaṣfā*, vol. 1, p.3.
112. Al-Shāṭibī, *al-Muwāfaqāt*, vol. 1, p.46.
113. Ibid., pp. 51-3.

114. Ibid., pp. 51-2.
115. Qur'an, 7:57.
116. Qur.' an, 2:164.
117. Qur'an, 50:9.
118. Ibn Taymiyyah, *Kitab a1-Mantiq* in Majanu ed, by 'Abd al-Rahaman ibn Qasirn (Beirut: Dār al-'Arabiyah, 978), pp.287-8.
119. Ibid., p.269.
120. Ibid., p. 267.
121. Ibid., p. 218.
122. Ibn Khaldūn, *Al-Muqaddimah* (Dār al-Fikr, n.d.), pp.428-9.
123. Ibid., p. 430.
124. Ibid., p. 430.
125. Francis Bacon. "Novum Organum" in *The Great Instruction* in *The English Philosophers from Bacon to Mill,* ed. Edwin A. Burtt (New York: The Modern Library, 1939), p.15.
126. Ibid., p.16.
127. Ibid., p.18.
128. Ibid., p.18.
129. Francis Bacon, *Novum Organum* in *The English Philosophers*, ed. Edwin A. Burtt, p.110.
130. Quoted in Irving M. Copi. *Introduction to Logic* (New York: Macmillan Publishing Company, 1989), p.435.
131. Quoted in Copi., p.438.
132 Quoted in Ibid., p.451.
133. John Locke, *An Essay concerning Human Understanding*, in *The English Philosophers,* ed. Edwin A. Burtt, p.248.
134. Ibid., p.249.
135. Ibid., p.253.
136. Ibid., p.283.
137. Ibid., p.349
138. Ibid., p.351 .
139. Ibid., p.352.
140. Ibid., p.350.
141. Ibid., p.373.
142. Ibid., p.358.
143. Ibid., p.391.
144. Ibid., p.392.
145. Ibid., p.395.
146. Ibid., p.392.

147. See also Ibid., p.390.
148. Ibid., p. 395.
149. David Hume, *An Enquiry Concerning Human Understanding,* in *The English Philosophers*, ed. Edwin A. Burtt, p.11.
150. Ibid., p.10.
151. Ibid., p.13.
152. Ibid*.,* p.14.
153. Ibid *.,* p.16.
154. Ibid., p.17.
155. Ibid., p.22.
156. Ibid., p.22.
157. Ibid., p.30.
158. Immanual Kant, *Critique of Pure Reason,* trans. Norman Kemp Smith (New York: St. Martin's Press, 1929), p.57.
159. lbid., p.44.
160. Ibid., p.190.
161. Ibid., p.55
162. Ibid.
163. Ibid., pp.105, 303.
164. Ibid., p.100.
165. Ibid., p.258.
166. Ibid., p.58.
167. See also Ibid., pp.180-7.
168. Ibid., p.265.
169. Kant, *Prolegomena to Any Future Metaphysics* (New York: Macmillan, 1988), p.52.
170. Kant, *Critique,* trans. Norman Kemp Smith, p.258.
171. Ibid., p.92.
172. Ibid., p.65.
173. Ibid., p.66.
174. Ibid., p.66.
175. Ibid., p.566.
176. Ibid., p.93.
177. Emile Durkheim, *The Rules of Sociological Method,* trans. W.D. Halls (New York: MacMillan, 1982), p.72.
178. Ibid., p.72.
179. Ibid., p.80.
180. Ibid., p.81.
181. Ibid., p.60.

182. Ibid., pp.56-7.
183. Needless to say, he defines "the thing" not as an existent, but as an observable object.
184. Ibid., p.69.
185. Ibid., p 94.
186. Ibid., p.97.
187. Ibid., p.97.
188. Ibid., p.66.
189. Ibid., p.99.
190. Ibid., pp.99-101.
191. Ibid., p.147.
192. Ibid., p.150.
193. Ibid.
194. Ibid., p.152.
195. Ibid.
196. Ibid., p.157.
197. Popper, "The Defence of Rationalism," in *Popper Selections,* ed. David Miller (New Jersey: Princeton, 1985), pp.33-5.
198. Ibid.
199. Ibid. p.34.
200. Popper, "The Problem of Induction," in *Selection*, p. 102.
201. Ibid., p.101.
202. Ibid.
203. Ibid., p.102.
204. Ibid., p.110.
205. Karl Popper, "Knowledge without Authority," in *Selection*, p.53.
206. Ibid., p.57
207. Popper. "Scientific Method", in *Selection*, pp.135-6.
208. Ibid., p.135.
209. Ibid., p.136.
210. For further discussion see Baruch Brody (ed.), *Readings in the Philosophy of Science* (Prentice Hall, 1989), pp.153, 171.
211. For further, see D.C. Phillips, *Philosophy, Science, and Social Inquiry* (Oxford: Pergamon Press, 1987), p.15.
212. See Popper, *The Poverty of Historicism* (London: ARK Paperbacks, 1967), pp. 5, 58; also by the same author, *The Open Society and Its Enemies* (London: Routledge, 1966), vol. 1, p.1.
213. Popper, *Open Society,* vol. 1, p.67.0
214. Most recently, textual analysis received more attention as it has become the primary analytical tool for hermeneutics and postmodern writers.

215. An early version of this chapter was published in *American Journal of Islamic Social Sciences* (*AJISS*), 1992, 10(4) pp.468-84.
216. John Locke, *An Essay Concerning Human Understanding,* in *The English Philosophers*, ed. Edwin A. Burtt (New York: Random House, 1939), pp.392-5.
217. Emmanuel Kant, *Critique of Pure Reason*, trans. Kemp Smith (New York: St. Martin's Press, 1929), p.265.
218. James Rosenau, *Turbulence in World Politics* (Princeton, New Jersey: Princeton University Press, 1990), p.50.
219. Pioneers of science in Medieval Europe were often harassed and persecuted under the charge of heresy.
220. Examples of the works which acknowledge these principles are: Chava Nachmias and David Nachmias, *Research Methods in the Social Science* (London: Edward Arnold, 1990), pp. 7-9; and E.A. Burtt, *Metaphysical Foundation of Modern Science* (Atlantic Highlands, New Jersey: Humanities Press, 1980).
221. TheTorah, the Gospel, and the Qur'an are examples of Divinely Revealed discourses.
222. See Kant, *Critique of Pure Reason.*
223. See, for example, Qur'an: (3:190), (10:5), (45:3), (51:20), (41:53).
224. Kant, *Critique of Pure Reason*, pp.630-2.
225. Ibid., p.258.
226. Although revelation is used in this work in reference to revealed truth, it refers in this context to any source of transcendental knowledge.
227. The doctrine of "the children of God" in Christianity could be blamed for the liberty non-Christians took in persecuting Christians, as it represents a remnant of the Greek and Roman religions. Similarly, the doctrine of "the chosen people" lent itself to even more pronounced ethnocentric tendencies since the Jewish identity is not acquired through faith, but matrilineally inherited.
228. 'Ali ibn Muḥammad Habīb al-Māwardī, *Al-Ahkam Al-Sultaniyyah* (Cairo: Dār al-Fikr, 1404/1983), pp.6-7.
229. 'Ali ibn al-Husayn ibn Babawayh al-Qummi, *al-Imamah Wa al-Tabsirah* (Beirut: Dār al-Murtada, 1985), pp.115-6.
230. Isma'īl ibn Kathīr, *Mukhtasar Tafsīr Ibn Khathīr*, ed. Muḥammad 'Ali al-Sabuni (Beirut: Dār al-Qur'an al-Karim, 1399), vol. 3, p.360.
231. See Ibn Rushd, *Bidāyat al-Mujtahid wa Nihāyat al-Muqtasid* (Beirut: Dār al-Ma'arif, 1406/1986), vol. 2, pp.146-59.
231. See a1-Shāṭibī, *A1-Muwāfaqat,* vol. 2.

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